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HERBERT BLAIR, EDITOR-IN-CHIEF
PROFESSOR OF SCHOOL ADMINISTRATION, BOSTON UNIVERSITY

VOL. LIV DECEMBER, 1933 No. 4

HEALTH EDUCATION NUMBER

MABEL C. BRAGG, *Editor*
Associate Professor of Education
Boston University

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EDUCATION

Vol. LIV DECEMBER, 1933 No. 4

THE HEALTH OF THE SCHOOL CHILD.*

W. W. Bauer, M. D.

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AMERICAN MEDICAL ASSOCIATION, CHICAGO

Dr. Bauer entered public health work as school physician in 1920 at Milwaukee and became epidemiologist of that department, in charge of contagious diseases, in 1922. He became health commissioner of Racine, Wisconsin, in 1923, and resigned December 31, 1931. Racine won first honors in Inter-Chamber Health Conservation Contest of the United States Chamber of Commerce for the year 1930 and honorable mention in similar contests for 1929 and 1931. In addition to being a member and fellow of the American Medical Association, Dr. Bauer belongs to the American Public Health Association, Social Work Publicity Council, Wisconsin State Medical Society, and Milwaukee Academy of Medicine.

SCHOOL administrators and public health officials are constantly faced with health problems in education. They are also faced with a vociferous public demand for economy. It is generally agreed that economy in public expenditures is necessary, and just as universally accepted that the public health must be maintained. Sometimes economy and health seem to clash. Plans must be devised to maintain the health of school children at the highest level posibe and at a price which the community can afford. There is a third consideration, even more fundamental; namely, that in preserving the public health at a reasonable cost, we shall not undermine individual initiative, destroy such important qualities as self-reliance and personal responsibility, or rob the home of its proper influence in the life of the child.

It must be recognized that there can be no universal plan for achieving the desirable objectives in school health problems. As conditions differ in communities, the measures taken must vary in order that they may be adapted to the circumstances in which they are expected to function. Any attempted statement, pertaining to a plan for school health supervision and service, must be limited to principles. The local application of principles is the responsibility of the officials and the citizens in every community.

The responsibility of the school for the health of the children must first be defined. Opinion is not unanimous on this point. It has been stated that the school is responsible for the health of the child. Without qualification, it is my judgment that such a statement is too inclusive. The school, in my judgment, is responsible for the health of the child only in so far as it creates certain conditions and forces the child into them. Because the community has made education compulsory, it

* Read at A Century of Progress, Parent Teachers Association Group, October 23, 1933.

must assume the responsibility for returning the child to the home in as good health as the child was received from the home. Beyond this, health of the child should remain the responsibility of the home.

Therefore the school is, and always must be, responsible for:

1. The provision of proper environment, in order that the child may not suffer from unwholesome surroundings into which his parents are compelled to send him. Environmental conditions include ventilation, lighting, toilet and washing facilities, drinking water, cleanliness, play facilities, protection against excessive heat or cold, protection against accidents, protection against immoral influences, and the avoidance of special environmental nuisances which, in certain localities, may have definite health implications (flies or mosquitoes).

2. For minimizing the occurrence of the communicable diseases by control measures and the encouragement of immunization.

3. A curriculum, including home assignments and extra activities, free from pressure and nervous strain, and with proper alternation of mental and physical activities.

4. A further responsibility is imposed on the school by reason of the progress which has been made and is being made in medical and allied sciences. Health is recognized as one of an individual's most valuable competitive weapons in the struggle, not only toward success and progress, but for bare existence. Knowledge about health preservation and the avoidance of needless illness must be transmitted to the child, and the school is the logical channel for such transmission. Education in healthy living, then, is a responsibility of the school.

5. The school must also protect its supporters, the taxpayers, against wasteful expenditure of educational funds. One of the sources of waste is needless repetition of grades by backward children. One of the causes of backwardness is impaired efficiency due to ill health or physical handicaps, especially of the senses of perception, namely, sight and hearing, and diseases which cause frequent absences, such as infected tonsils and carious teeth, and the communicable diseases.

I regard the five responsibilities of the school, just enumerated, as fundamental and inescapable. I do not accept as any part of the logical responsibilities of the school system some of the other functions which in some localities have been assumed. I do not think the schools should undertake medical treatment through the correction of physical defects. Except for emergency first aid, medical treatment is no part of the responsibility of the school to the child. Neither do I regard charitable and social service activities as a proper function of the schools. It must be recognized, of course, that physical defect correction may need to be encouraged through the school system, as a part of its educational function to promote healthy living. It must also be emphasized that the school must co-operate with charitable agencies in the community. It ought not, in my opinion, to usurp the functions properly discharged by other community groups. It has responsibilities enough of its own.

How the fundamental obligations of the schools shall be met is, as previously stated, a question to which there

can be no stereotyped answer applicable to all problems. Certain principles can be stated, and I conceive these principles to be, in essence, as follows:

1. A school administrator, whether of an extensive system or only a one-room school, should have access to consultation with a medical advisor. In the great cities, this should be a full-time physician, with necessary assistant personnel. It does not matter whether he is part of the school organization or of the health department, but in either case he must wield authority commensurate with his responsibility. In the small community which cannot employ a physician full-time, a part-time school medical advisor or a committee designated by the local medical society is desirable. In either case, close co-operation between the school medical advisor and the medical profession will be of advantage to the school system.

2. The school medical advisor—and I propose this term in preference to the inaccurate designation "school physician" now in vogue—should have supervision over the environmental conditions surrounding the school children and over the curriculum, not only with respect to health education itself, but the general plan of activity, mental and physical, and especially the arrangements for pupils whose health requires special consideration from either the physical or the educational standpoint.

3. The school medical advisor should prescribe a periodic physical examination program for the school children, according to the needs and the resources of the community, and see that it is carried out.

(a) He should devise and provide blanks for the necessary records, and supervise the carrying into effect of recommendations, physical, medical or curricular, arising out of physical examinations.

(b) He should co-operate with local practicing physicians in procuring from them records, on blanks furnished by the schools, of physical examinations of children whose families are unable to provide medical service at their own expense.

(c) He should perform, or have performed by his staff, the physical examinations of children whose parents are certified to him by properly accredited social service agencies, as unable to pay for their own physical examinations.

(d) He should encourage, through school nurses or visiting teachers, the carrying out of recommendations made by examining physicains; in the case of examinations made by his own staff, he should aid in procuring medical or surgical service, the fitting of glasses, and other necessary special treatment, through the medical profession, with co-operation as required from social service agencies.

(e) In a community where health education or public health work is in a pioneer state, physical examinations of school children may be carried out as a community project, for purposes of education and demonstration only, for a limited period.

In the absence of organized service agencies in a community (but *not* otherwise), their functions must be assumed by the school principal, or in the case of one-room schools, by the teacher, in co-operation with designated committees or individuals from the local medical society.

4. The school medical advisor should encourage, through legal or educational means or both, according to local circumstances, the performance of immunizations against smallpox, diphtheria, and in some localities typhoid fever, and such other diseases against which effective immunizing measures may in future be developed, causing the immunizing to be done by family physicians except where families are unable to pay for such service, in which case provision must be made by the community, either through payment to practicing physicians or through performance by salaried staff physicians. Records of the immunity status of the school population should be kept, and educational campaigns in behalf of immunization should be waged.

5. The school medical advisor should supervise the menus and the sanitation of any school cafeteria or school lunch projects which may be found necessary. Except where circumstances require it, warm lunches should not be provided at public expense, but through co-operation of the school and the family, the family wherever possible paying the expense of feeding its own child or children. Those unable to pay must be provided for.

6. The school medical advisor should have authority, and should be required to make or have made, at any time when his judgment so dictates, all necessary inspections of school children for the purpose of protecting the group against the introduction of epidemic disease or vermin, unless such service is provided by the health department of the community. All such protective inspections being for the protection of the group, should be made at the expense of the community.

7. The actual medical work of the school medical advisor should be limited strictly to necessary emergency aid when accidents or illness occur on or near the school ground under circumstances requiring instant action, and to examination of children whose families cannot afford to submit an examination record from their family physician. He should, however, have the authority to review all examination records submitted, and in the interim between regularly required physical examinations, should be ready to make or cause to be made superficial examinations of children whose school records lead teachers to suspect a newly developed health problem or aggravation of one previously recognized. Such examinations should be for the purpose of referring the child for a re-examination to the family physician, or if the family be unable to provide this service, to the school medical staff or such other physician as may be designated for making the examination at public expense.

8. The school medical advisor should make and preserve records pertaining to the health of the school children, recording thereon all advice given, all corrections made or treatment procured, and the progress of the child subsequent to treatment. He should accept certifications from regularly licensed physicians as to corrective work and immunizations done for school children.

9. The school medical advisor should prescribe and supervise a plan whereby all teachers would have a periodic physical examination, preferably annual, in order to protect the

school against the possibility of teachers with communicable diseases, especially tuberculosis, coming in contact with pupils. Non-communicable diseases, however, should not by their mere existence in any way prejudice the tenure of the teacher while he (she) discharges his (her) duties in a satisfactory manner. Such examinations should be made at the teacher's expense, by the physician of his (her) own choice, and except for a certificate of freedom from communicable disease, the detailed record should not be required for filing in the school.

10. The school medical advisor should assist in the arrangement of the health education program, scrutinizing all material proposed for use therein as to its medical soundness and usefulness, and all books and other source materials should have his approval.

11. The school medical advisor should supervise all physical and athletic activities, but the certification of individual students for athletic competition or limitation of prescribed physical education should be left in the hands of the family physician.

The school medical advisor should cultivate the co-operation with the schools of all agencies in the community, and of all individuals and groups who have an interest in the public health and specifically the health of the school child, enlisting co-operation and rendering it in turn, with scrupulous care at all times to keep within his own proper sphere as he expects his co-operators to keep within theirs. Parents, whether organized or not, should be his special interest. While the school should recognize its responsibilities and meet them squarely, it should also recognize and respect those of the home. Protection against environmental hazards, injury, communicable disease and overwork is the responsibility of the school, as is health education. Physical improvement may and ought to be suggested and encouraged by the school, which thus accepts an opportunity to contribute to a better life through better health, but the final responsibility for personal health must remain on the person, or in the case of a minor, on the home. The home, together with the family physician, is responsible for the health of the children in that home, except as the school subjects the child to special hazards over which the home can have no control.

HEALTH TRAINING FOR TEACHERS

DR. ADELAIDE STEELE BAYLOR
CHIEF, HOME ECONOMICS EDUCATION SERVICE
OFFICE OF EDUCATION, DEPARTMENT OF THE INTERIOR

Dr. Adelaide S. Baylor is a graduate of the University of Chicago, holds a Master's degree from Teachers College, Columbia University, and an honorary Doctor's degree from the Stout Institute, Menomonie, Wisconsin. As State Supervisor of Home Economics in Indiana she organized and directed in its early years the state vocational program of home economics. Dr. Baylor was called to Washington, D. C., in 1918 to serve as Federal Agent for Home Economics in the central and southern regions, and was made Chief of the Home Economics Education Service, Federal Board for Vocational Education, in 1923, a position she now holds with duties transferred to the United States Office of Education. Under her leadership as chief of this service the program of vocational education in home economics has been extended to Hawaii and Puerto Rico and the program in the country expanded from 1,393 centers, 3,830 teachers, 139,341 enrollment in 1923, to 4,268 centers, 6,449 teachers, 265,495 enrollment in 1932.

IN preparation for a paper to be presented before the Health Section of the World Federation of Education Associations held in Honolulu in 1932, the writer made some excursions into the field of health training for teachers. Inasmuch as time was limited, the survey was confined to three sources of information: correspondence, articles in periodicals and other publications, and bulletins. Some of the findings and conclusions are herewith submitted.

Inquiries concerning programs covering health training for teachers were addressed to two state normal schools, one state normal college, one state teachers college, five state universities, one land-grant college, one city school system, two institutes of technology, one large vocational school, and one childrens fund program. There was no attempt in this correspondence to collect any statistics for tabulation, since this has been well done in bulletins discussed later in this paper, but to secure some description of programs and their objectives, and of the ways and means adopted to insure the achievement of these objectives and of evaluating results.

With the exception of the vocational school and the city school system, these programs for the most part have to do only with the pre-service health training of teachers.

Maryland Normal Health Program.

In the State Normal School at Towson, Maryland, the work organized under a health program committee includes a rather large group of faculty members—health and physical education teachers, the physician, the nurse, the dietitian, the social director, directors of teacher training, and a member of the psychology department. The aim of the group has been to co-ordinate the program of health education and to place emphasis on health training in all departments of the school where there is any occasion for emphasis. This committee works with the various departments and makes recommendations for improvement in the living and working conditions of students. Among the things it has accomplished during the past several years are: the installation of showers for physical education students, the study and improvement of menus in the dormitory and cafeteria, the im-

provement of lighting in students' rooms and classrooms, and the study and improvement of programs carried by the students. The committee does not, of course, supply the funds for these improvements. The principal of the school is a member of the committee and is keenly interested in the health of the students.

Other changes brought about in this institution through this health program committee are: more frequent physical and medical examinations for students, the setting up of medical standards for entrance, and the more rigid enforcement of medical follow-up work.

A second committee, known as the health officers committee, and composed of representatives from each class, brings to the health program committee of the faculty suggestions for improvements and information in regard to unhygienic conditions of which the students are aware.

Examination, Periodic Conferences, Health Courses and Preventive Measures Stressed in Jersey Normal.

At the New Jersey State Normal School, Newark, New Jersey, the health program begins when the student applies for entrance to the school. She is given a form to be filled out by her family physician and to be mailed to the school with her application blank. Those who pass the academic examination must also pass a health examination given in June by the medical examiner of the school. This examination is not a duplicate of the one given by the family physician, through which the student receives a more detailed laboratory examination than that for which the school has facilities. The examination at school begins where the family physician left off, and takes up in detail the student's commuting program, her habits of rest, exercise, diet, and similar factors. This examination is used as one basis in the selective admission program. Much follow-up work is done when the student enters the school in September, and the first year's classroom instruction consists largely of personal hygiene based upon the findings of the school medical examiner. More emphasis is placed upon individual physical improvement than upon accumulation of knowledge. Most of the work during this year is through individual conference. Each freshman has a conference at least three times during the year with the medical examiner and the health counselor, and many of them have as many as six to eight conferences.

Last year the institution initiated with gratifying results the experiment of having all of the students receive a fluoroscopic examination, and when indications warranted, a chest X-ray. This service was made possible through the co-operation of the City Board of Health, and was carried out to determine whether or not there is a problem of pulmonary tuberculosis with this age group.

During the second year of school, classroom instruction is based largely upon community hygiene and factors which promote the health of the school child. Individual conferences are still conducted by the health counselor, and cases referred to the medical examiner as need arises. During this year students go out for practice teaching.

During the third year the classroom instruction continues with the consid-

eration of the school health program as a whole, the evaluation of health activities, and health literature, and a start has been made toward continuing the individual conferences with the senior group. The health service is very closely linked up with classroom instruction, physical education, and with the activities of the mental hygiene department.

Problems which arise in connection with the health of an individual student are referred by the student's counselor to the dean, who in turn discusses the problem with the health counselor, the visiting teacher of the student's counselor, or a combination of all three, as indications seem to warrant. Likewise the health counselor frequently refers cases through the dean to the visiting teacher or the student's counselor.

Some work has been done during the last year with a group of students who are particularly susceptible to colds. This group has met with the medical examiner and health counselor each week to study cold prevention. While considerable was accomplished with this group, it was not large enough, and work with it did not extend over a long enough period of time to enable the drawing of any reliable conclusions.

Definite Objectives Set Up by Michigan State Normal College.

In the Michigan State Normal College, Ypsilanti, the major health training objectives are:

1. To determine by periodic examinations and conferences the health status and practices of the college student. Health is here considered as an integration of satisfactory physical, mental, emotional, and social development.

2. To guide the student in self health evaluation and in planning for the maintenance, correction or improvement of his mental and physical health.

3. To set up a co-operative plan for maintaining and using the college environment to give prospective teachers practical experience in helping to control the healthfulness of environment.

4. To provide the prospective teacher with the greatest possible opportunity to study, (a) the principles and practices that maintain, improve, defend, and restore the health of children, and (b) the relation of these principles and practices to the general educational procedure.

On the bases of these objectives content of courses and forms of class procedure are effected as follows:

a. A cumulative health record is kept for every student and is used in conference with the individual student.

b. The personal hygiene content of the courses is based upon the findings revealed by the health record cards.

c. Opportunities are offered for surveying and evaluating the college and training school environment in relation to health.

It is anticipated that the effect of this program upon the educational outlook and teaching practices of the students will be:

a. A participation of the teacher in the health appraisal and health improvement of his pupils.

b. An appreciation of the practical value of a controlled environment to teaching and learning problems.

c. A realization that health cannot

be taught as a subject but must be a part of every activity of the day.

The Health Cottage Service, which was organized at Ypsilanti in 1915 under the direction of Miss Cross from Dr. Peterson's Hospital at Ann Arbor, is now under the direction of Dr. Glenadine C. Snow. The Rest Classes, which provide an hour of rest from 11 to 12, just before lunch, and supervised rest during the regular physical activity hours in the afternoon, are unique features of the service. An attempt is made to keep the organization elastic enough that it may fit into the student's program to his advantage.

Another interesting feature of the work in this institution has been the making of a survey of health conditions there by the students, relative to ventilation, illumination, drinking fountains, and toilet rooms—with conclusions and recommendations where conditions are now adverse to health.

Universities Broadening Health Programs.

From the five universitites contacted in the survey come some very interesting comments and information concerning their health program for girls and particularly for prospective home economics teachers.

The University of Georgia, for instance, provides yearly medical examinations for all students and more frequent examinations when necessary; includes health lectures in its curriculum; provides a system of health advisers for freshman girls who counsel with their proteges on food and other health habits; provides for physical development through tennis and other sports; impresses upon the prospective teacher the necessity for exemplifying in herself the health principles she attempts to teach; endeavors in its course in personal and community health not so much to teach facts as to establish attitudes toward health and a vital interest in health as a fundamental asset for living; through a social director who is in charge of the home life of the girls, inculcates daily health principles; and maintains an active co-operation between the University physician and the Division of Physical Education.

A practical turn is given the undergraduate nutrition courses offered at Cornell University, which are elected by prospective teachers of home economics in the junior and senior classes, by having individual students consider themselves as case problems and apply their nutrition training in bringing about beneficial changes in their health, food, and hygiene practices. Throughout her course, the home economics student is impressed with the fact that good health on her part will increase the effectiveness of her home economics teaching program.

Ohio State University, University of Tennessee, and University of Oklahoma, all lay special emphasis on courses in nutrition, home nursing, and health education. At Ohio State an effort is being made in the Women's Division of the Department of Physical Education to develop health education courses which will give physical education teachers an understanding of the field of health education and the principles upon which the teaching should be based. To meet the call for teachers who are competent to handle a combined course in health and physical education, the

University is featuring this combination in its curriculum. Personal hygiene, school hygiene including health examinations, health education, the teaching of health education and related courses in individual gymnastics, are among the fields covered in the Ohio State courses.

New ground was broken at the University of Tennessee last year when a grant was received from the State for research looking toward the development of a training course for teachers in health education, which was to be based on a health program for the entire State. One of the fellows provided for under this grant majored in nutrition. The other three majored in education, bacteriology, and chemistry, respectively.

Iowa State College Conspicuous for Health Activities.

Of the Land-Grant Colleges, Iowa is conspicuous for its program of health instruction and activity, and since this institution excels all other land-grant colleges in its enrollment of women in home economics courses, a large number of whom are training to be teachers, its plan is of special interest.

The hygiene department is responsible for an annual physical examination of each woman student and for the medical follow-up necessary as the result of recommendations concerning the student's diet, rest, gymnasium program, and schedule. It is also responsible for a course in personal health given in co-operation with the food and nutrition and physical education department.

In 1930 the Iowa College experimented with a special diet table for underweights and overweights. An added fee of $2.00 a week was charged to cover the extra maintenance expense of this table. The results of this experiment were very beneficial to the girls who were able to stand the additional expense.

The following year the plan was modified, the college nutritionist undertaking to help the girl requiring a special diet to choose the foods necessary to this diet as far as possible in the dining room in which she takes her meals. A group of underweight students was assigned to an advanced student who was underweight herself and who, as her nutrition problem, was to undertake the guidance of the diet of the entire group.

A woman's health council composed of one girl from each women's residence group co-operates effectively in the college health program. In 1930, when colds were especially prevalent, this council prepared mimeographed sheets to be posted in each house, giving suggestions for preventing and treating colds. Council members co-operate in getting sick students to enter the hospital, wear the proper kind of clothing, and use the proper kind of toilet accessories, such as rubber shoes and caps for dormitory showers.

Individual conferences are an important part of the health program, and through the strong co-operative exchange which exists among the offices of health education, the women's physician, the junior couselors, and the offices of women's affairs, machinery is set up by which easy adjustments are possible to meet the individual needs of any one student.

Reports from the land-grant colleges

as a whole reveal that the stages in the development of student health service cover the widest possible range. While one college reports that it does not have either a college physician or health facilities of any type, the picture at the other extreme is that of the most modern provision for health care in every field.

One of the newer departments for the care of student health maintained in a number of these higher institutions, is that of mental hygiene. It is coming to be recognized that many illnesses, mental or emotional in their nature, that are as devastating as tuberculosis, may have no physical manifestation but may wreck a student's college work nevertheless. Two tendencies are shown in handling this phase of student health. The one which seems soundest in all respects is that of having a special physician trained in psycholopathology attached to the regular health service. The other is to develop psychotherapy in relation to the department of psychology.

In this inquiry on the subject of health training for teachers a surprising amount of valuable information was uncovered in articles in magazines and other publications.

"Teachers' Health" Symposium Cited.

In the *Nation's Schools* for January, 1929, appeared a symposium on "Safeguarding the Teacher's Health," in which were set up the facilities maintained in 23 cities for the conservation of teachers' health. These facilities included medical examinations; medical treatment, rest rooms, cots in clinics available for teachers if needed; cafeterias and kitchens for their use; recess periods; sick leave; hot lunches; provision for use of gymnasiums, well lighted, well heated and well ventilated school buildings; chairs, cots and blankets for first aid materials; relief periods during the day; sabbatical year; use of school nurse and teachers' kitchen and dining room. In one instance teachers were urged to leave the schoolroom at least one hour after school closed, for recreational activities, but aside from this there seemed to be no plans for giving regular health training to teachers in the schools.

In this symposium one superintendent writes:

> "It has always seemed to me a rather anomalous situation when we presented to the pupils in the schools certain standards and rules of health and at the same time made no effort to impose these standards and habits on our teachers. It is true that many of the textbooks and courses of study on the subject of health have presupposed or created artificial conditions and contained much that was pure bunk. Recent efforts have resulted, I think, in saner courses of study, recommending standards and habits that are at least partially attainable."

Responsibilities of Teacher-Training Schools Outlined in Bulletin.

In a bulletin, "The Health of the Teacher," prepared by Dr. James Frederick Rogers, Chief, Division of Physical Education and School Hygiene, United States Office of Education, and issued in 1926, the responsibility of teacher-training schools for the examination and selection of candidates for teaching, their housing and feeding, and their preparation in hygiene, is emphasized. This publication also emphasises the responsibility

of the local school board for healthful working conditions in the school, adequate salaries for teachers, pensions, sabbatical leave, medical supervision, and sick leave. In Connecticut, according to Dr. Rogers, and more recently in Massachusetts, the State has exercised control over the health conditions of students entering normal schools to train for teachers. In Philadelphia, Washington, and New York, similar plans are in operation; and in Gary, Indiana, a program of health protection for teachers in service is in use.

Health Education as a Required Course Discussed.

In a more recent bulletin of the Office of Education, Dr. Marie M. Ready, formerly Associate Specialist in Recreation, discusses the results of a study of the status of physical education and health education as required subjects of the teacher-training curricula of institutions of higher learning.

This bulletin shows that a large percentage of the institutions offering teacher-training courses have one general requirement in physical education for all students; that practice teaching in physical education is offered to some extent by a few institutions; that health education has gained considerable recognition in teacher-training courses; that a beginning has been made in providing incidental instruction for teacher-training students regarding the examination of school pupils for physical defects and communicable diseases; that a few State departments of education recognize the value of having all teachers properly trained to supervise health education and physical education; and that educational authorities in general, in teacher-training institutions, realize that education and physical education are problems in teacher-training which deserve careful consideration.

Value of Health Programs Shown.

Space does not permit entering into further detail concerning the facts gathered in this brief survey of the subject of health training for teachers. Sufficient data and information, however, have been presented to show not only the value of such training but also to show that teacher-training institutions, boards of education, and colleges and universities realize the value of training the prospective teacher in both physical education and health education. And when a city superintendent already quoted in this discussion can make the assertion that at least "60 per cent of teacher absences are due to preventable causes"; and another authority declares that the teacher who, because of buoyant, surplus health, "is serene under stress, enthusiastic under routine, and sympathetic with her pupils rather than with herself, will be voted a whole crown of gold stars when she is rated by her pupils," the need for educating prospective teachers in phyical education and hygiene is patent.

Fortunate it is, then, that our teacher-training institutions are awakening to this need.

VIRGIN ISLANDS

School Health Program Utilization of Existing Facilities*

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WHEN the suggestion was made to the government of Denmark in 1864 that the United States would consider purchasing the group of islands in the West Indies which they owned since 1812, no one could foresee that 53 years would intervene before the arrangements were consummated.

During the administration of President Lincoln, Secretary of State Seward decided that the United States Navy needed a naval base as well as a coaling station in the Caribbean. Government engineers at that time selected the island of St. Thomas as having the harbor facilities required. Negotiations were carried on toward this end by each of the succeeding administrations, resulting in an agreement being reached in 1917, whereby, through the payment of twenty-five million dollars to Denmark, an area of 133 square miles, about twice that of the District of Columbia, known as the Virgin Islands, became the property of the United States. A plebiscite was held as one factor in the agreement upon which the Danish government insisted, at which time the inhabitants expressed their desire that the ownership of the islands be transferred to the United States. Twenty thousand citizens were thus added to the population of the United States, a large majority of whom are negroes, with a sprinkling of peoples with ancestry that can be traced to Holland, Spain, England, France, and Denmark.

Though there are fifty islands in the group, only three are occupied—St. Thomas, St. Croix, and St. John. The capital is St. Thomas. From here the United States Navy administered Virgin Islands affairs from 1917 to 1931, when a civil governor was appointed by President Hoover and the Navy withdrawn.

The great natural beauty of the Islands lies in tropical growth covering high hills which rise abruptly from the sea. Lafcardio Hearn says of this land: "The Islands have a true volcanic outline, sharp and high; the cliffs sheer down almost perpendicularly. The shape is vapory, varying in coloring from purplish to bright gray, but wherever peaks and spurs fully catch the sun they edge themselves with a beautiful green glow, while interlying ravines seem filled with foggy blue. Just as the lustrous colors of humming birds shift accord-

* Read before the Child Hygiene Section of the American Public Health Association at the Sixty-second Annual Meeting in Indianapolis, Indiana, October 10, 1933.

ing to changes of light, so the Islands shift colors here and there from emerald to blue to gray. As you draw near there is a lovely heaping of bright hills in front with a part of the coastline very low and long and verdant in front with white beach and and tufted with spidery palm crests. Some palm trees poised, their trunks like pillars of unpolished silver, their leaves shimmer like bronze. There is a great wealth of verdure; cabbage and cocoanut palms overlook all the streets, bending above almost every structure."

The climate is delightful, ranging from between 70 and 90 degress, and the Trade Winds constantly in motion prevent discomfort at any hour in any month of the year.

The water supply is entirely dependent upon rainfall and cisterns are used because of the volcanic nature of the soil. These seem to furnish adequate amounts for personal use, though the rainfall has lessened increasingly during the last few years and affects the growth of the crops.

Sewage is handled by the Department of Health, through sanitary inepectors, under whom the toilets are cleaned regularly. As the people live in simple wooden houses, clustered together, such supervision is not complex.

The Danes had established three general hospitals on the two main islands, and one leper colony. These have been continued by our government and additional public health services developed. Public health nurses, native girls trained in the Islands, serve on the two larger islands; and the American Red Cross has, until lately, furnished a nurse who supervised certain portions of this service.

The attention given lepers in the Virgin Islands is a story in itself, but it does not seem fair to pass over it entirely. Under a well trained doctor, cases of leprosy are traced and excellent care furnished them in a colony on the Island of St. Croix, where young and old seem contented. The percentage of cures compares favorably with better equipped institutions.

The economic conditions are such that the people subsist on very little. The Welfare Commissioner informed me that $2.00 a month is sufficient for their indigents; 50 cents being paid for rent and $1.50 for food.

The four thousand children in the scattered schools, with one hundred and eleven teachers, are under the Department of Education, while school health services are conducted by the Department of Health. A full-time health commissioner has been in office until recently, when reduction in the administrative budget resulted in the elimination of this office. The duties, however, are to be handled by the Superintendent of the St. Thomas Hospital, Dr. Knud-Hansen, who is a capable, experienced, and conscientious man. Health examinations are conducted in the schools annually and provision made for the correction of medical and dental defects free of cost.

As the purpose of Governor Pearson's invitation to me to visit the Islands was to procure guidance in the development of a practical school health program without incurring additional expenditure, my first step was to ascertain the form of administration and the views of these officials as to the needs. Then came observation in the homes and talks with the people of different classes, to determine their

standard of living, their tastes, and the limitations imposed by circumstances.

The schoolrooms were then visited and classes observed in all grades of all schools. Teachers talked freely, and this information, with knowledge gained from the school administrators, made it possible to ascertain the capacity of the teaching force upon which to base a program which could function with the facilities available. There was much to be done and so little with which to do it that it seemed discouraging, but when the resources were listed and compared with those of China, Japan, and the Philippine Islands, as well as those in certain sections of the United States, it was evident that conditions in the Virgin Islands did permit definite steps which could be expected to promote a practical school health program without additional expenditure of funds.

Though public education, with a compulsory attendance clause, has been in operation in the Islands since 1852, and only the English language taught, the teaching staff cannot be classed as trained teachers; a seventh grade education being the average. How teachers with these limitations could promote a health program was one of the questions to be faced. Based on the theory that teachers who have taught the "Three R's" so successfully that there is not an individaul on the Islands who cannot read and write, can also teach the elements of health to children, plans were developed to secure their coöperation.

In consultation with the medical and public health and dental authorities, the hygienic weaknesses common to all classes of the people were determined. Essential practices for the prevention of specific illness and the maintenance of health in that locality were then classified and a selection made of those which all agreed should be stressed with the school children.

Malnutrition, though caused to some extent by insufficient income, was not found to be dependent upon this factor entirely, but rather because of family customs and individual tastes. As tuberculosis takes a considerable toll, even though abundant sunshine is available and the people live their lives largely out of doors, it was deemed important to stress a well-balanced diet. Rice (polished), fish, cocoanuts, bananas, sugar-cane with milk for infants and the aged, now furnishes the basis of the diet. Garden truck, especially lettuce, egg plants, and potatoes are, however, grown, and tomatoes are exported to the States as a business, though few, relatively, are consumed on the Islands. It was obvious that home gardens should be emphasized in the schools and the value of these foods taught to children of all ages.

An epidemic of malaria had visited the Islands just previous to my visit last winter, 900 cases being reported with 22 deaths. Because of this, it was considered advisable to include malaria preventative measures in the list of health essentials. Plans for constructing screen frames for windows were developed; these to be made by boys in the manual training classes. Also screened "safes" for the protection of food in the home. Water drinking in school, though made possible by huge and beautiful old clay jars, was not always protected. Covers were made by the students and plans developed for dipping the water with

a gourd ladle. As individual drinking cups were not usual, each child was asked to procure a gourd and mark it with his name. Keeping all containers free of water was stressed for class teaching.

Hand-washing after toilet and before food was made practicable by use of Standard Oil cans, which so satisfactorily serve in tropical countries as containers for all sorts of fluids. One can for waste water, one for the water supply, a dipper, liquid soap made from soap oddments and placed in a bottle with a perforated top, a basin, monitors to supervise the performance, and sun does the rest. Children lined up at recess after visiting the toilet, and one child poured water over cupped hands, another sprinkled soap, another poured a dipper of rinse water, and then came the shaking of two hands vigorously in the sun. Excitement ran high in reporting the children's ability to dry hands with less shakes than a competing group.

Neatness in outside toilets may not seem important, but children who are not taught to keep toilet seats clean and floors clean will not use them at regular intervals, so a committee system was devised for the keeping of paper in place and for supervising cleanliness and order.

Health examinations are not popular with women in tropical countries, and they had not been introduced among the women teachers of the Virgin Islands. It was recommended that all teachers have the privilege of a private thorough health examination by a doctor, with the understanding that her school record would not be affected by the findings. This was planned primarily to assist the teacher to comprehend the value of such a proceeding. Though health examinations of all school children had been conducted in the Islands annually for several years, and follow-up care by nurse was available, it seemed desirable to increase the educational value of this proceeding by having the teacher of each child present for these examinations as well as the nurse responsible for that particular school. The health officers and dentists agreed that this was practicable and the plan put into operation immediately. Health record cards being made available to all teachers was also considered feasible. My experience leads me to believe that teachers will use such records advantageously, to secure the child's coöperation to correct the defect, only if stimulation and guidance is furnished her by the educational administration and by the nurse. When such supervision is furnished, having the cards so utilized is a very valuable procedure.

Because the infant mortality is high and girls become mothers very early in the Virgin Islands, it is vital for the girls to be impressed with the worthwhileness of the proper care of an infant. The director of education agreed to this premise and decided that seventh grade girls should have such training as circumstances permitted. The following plan was evolved:

As part of school work, for which academic credit would be offered, fifteen girls were to be given an opportunity to learn how to bathe, feed, and care for a baby, the selection of students being based upon the interest of the girls and their receptivity toward the project. The student to have two classes of at least fifty minutes a

week at the local hospital, where a suitable nurse would demonstrate with a real baby. Such a class to serve as a demonstration with the view of including all suitable girls in such classes. The length of the course to be decided as the work progressed.

All teachers require a health library, and these teachers especially. An arrangement was made with the local Carnegie librarian to place certain books on the shelves of the two public libraries and recommendations made to the Director of Education to supply specific booklets and pamphlets which are available free in the States for the use of each teacher. The "twelve inch" book-shelf made by boys in the manual training classes furnishes a place—a distinct unit—where the knowledge teachers require to impart health adequately can be found. Health texts were also recommended to be purchased from the school book fund when circumstances permitted.

Though funds were not available for the appointment of a Director of Health Education, a recommendation to that effect was made to the authorities and efforts made in the States to secure an appropriation to insure such service.

Lectures to the assembled teachers and conferences with supervisors were, of course, conducted to stimulate their interest in health teaching and to furnish guidance to them, but a satisfactory coördinated school health program cannot be developed and carried on without the supervision of some one person, who has a knowledge of not only the various phases of the subject, including both services and classroom teaching, but a strong conviction that a school health program involves the coördination of both health and educational procedures. It is possible to develop better health practices than those which exist through the schools of any country without vast expenditures, but it is expensive to attempt to carry forward a health program in any school system without trained supervision. Such personnel serves to coördinate activities of all concerned—to save time and money—and what is more important—to hold aloft the ideal of knowledge—practically applied—in the lives of the children.

A COOPERATIVE HEALTH EDUCATION PROGRAM IN THE PHILIPPINE ISLANDS*

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INTEREST in and a desire for education are keener in the Philippine Islands than in almost any other part of the globe. Free public schools have been opened on an extensive scale to meet the demands for education. A million and a half children and twenty-six thousand native teachers constitute the human factor in the educational system, so that practically every home among the twelve million people of the islands is represented. No other agency in the Philippine Islands furnishes such an excellent medium through which health education can reach all the people. During the past thirty years the school has been a powerful factor in the progress made in health and sanitation. Cholera, the scourge of the tropics, has been conquered, and smallpox has been driven from the islands.

In spite of the tremendous accomplishments in which the school has played its part, large health problems remain, problems in which the school not only coöperates but in which it takes the initiative. These problems concern nutrition, with beriberi taking a heavy toll in life and vitality and tuberculosis contributing to a very high death rate; sanitation, with from 75 to 100 per cent of the school population infested with intestinal parasites which sap vitality and pave the way to acute respiratory infections; unhygienic habits of living which permit parasitic and fungus skin diseases. In all of these health problems education is needed before much improvement can be expected.

Health education in the Philippine Islands presents a problem which differs in certain respects from that of occidental countries. Much that is often taken for granted as a part of the child's home training must be the subject of careful teaching in the school. The school is frequently the only avenue through which health instruction can be carried into the homes and it endeavors to influence the parents through the instruction given to the children. It is therefore necessary for the school health education program to give intensive instruction in elementary health procedures, especially with regard to environmental

* Presented in the Health Section, World Federation of Education Associations, Dublin, Ireland, August 2, 1933.

sanitation, and school children must be led to accept and adopt scientific health procedures of the most elementary nature.

Extensive campaigns in constructive health work in schools are not undertaken in the Philippine Islands as is done in many western countries. Practically no follow-up work is done by the medical profession after school inspections. This type of work is limited to what can be done in the school first aid clinic. While campaigns are not carried into the school, it is often true that the school carries campaigns into the community, such as sanitary inspections of the homes. The schools in the Philippine Islands must fill a gap in health work created first, by the ignorance of the lower classes of people regarding even the most elementary rules of health and, second, the lack of any adequate system of public health nursing or home visiting nursing by which instruction in health matters could be taken into the homes.

The School Health Program.

In the schools physical inspections and immunizations for cholera, typhoid, dysentery, and smallpox are given by the Bureau of Health. Limited corrective work and treatments are provided in public dispensaries outside the school. However, because of the pressure of other duties upon the health official's time, the medical service in the school is usually an adjunct rather than an integral part of his program and is frequently crowded out. The difficulty in securing needed treatment for the correction of defects among school children is increased by the fact that the public dispensary may be many kilometers from the school and may lack proper equipment and supplies.

The nursing service in the school is provided from three sources: the Bureau of Education, American Red Cross, and the Bureau of Health, but even so it is inadequate. 150,000 school children are without nursing service of any kind. Many of those in districts where nurses are assigned are actually without the service because the number of children per nurse is too great and because the difficulties of travel hamper the movements of the nurse. The number of children per nurse in different provinces ranges from 3,000 to more than 50,000, with the median around 8,000. These figures, however, do not tell the story completely to one who is unfamiliar with conditions as they exist in the various sections of the archipelago.

Schools are separated often by hours of travel, perhaps in tiny barroto paddled by hand up rivers or even across open sea; or over mud swamps where only sleds, drawn by the slow-moving carabao can pass; over mountain trails requiring hard climbing, with many streams to ford and with overhanging foliage laden with hungry leeches; over plains with cogon grass head high, where the sun reaches down mercilessly or rain falls in torrential floods. These difficulties and more are encountered by school nurses in the course of their travel schedules and contribute to the inadequacy of the service. In many places a visit to a school of a few days once a year may be all that is possible.

Further handicaps to successful health work are encountered because of the lack of adequate preparation of teachers. But one-third of all the

elementary teachers have had any professional training for teaching, and of these many attended normal school before adequate courses in health education were offered. Under such conditions with regard to the medical and nursing service and the qualifications of teachers every effort must be made to utilize what is available to the fullest extent.

The plan developed in the Philippine Islands is not recommended as ideal or adequate. It is simply an earnest effort to encourage better use of what is available in limited quantity. Briefly it involves the following:

1. The provision of health education courses in normal and vacation schools for developing in new teachers and in teachers already in service the knowledge and skill requisite for teaching health.

2. The encouragement of classroom teaching of health and supervision of health practices in school, because this seems to offer the greatest possibilities for improving health and is possible in every school without the expenditure of additional funds.

3. The promulgation of a system of school clinics and first aid teachers to make the nursing service more effective and to meet the lack of dispensary service.

The Preparation of Teachers for Health Teaching.

The program in normal schools attempts to take care of three needs in health teaching: the provision of an adequate background of health knowledge; familiarity with child psychology, the principles of teaching and the specific methods which will be effective in getting children to practice proper health habits; and finally, the personal health of the teacher. Of these, the work of acquainting the student with sound subject matter, so that he will not teach fallacies, is considered of the greatest importance, for tradition and custom play a large part in the lives even of those who have had the benefits of an extensive education, and need to be subjected to the strong light of scientific analysis.

The courses in the normal schools which contribute to preparation for health teaching are: science, biology, and health education for basic health knowledge; and psychology, principles of teaching, and health education for methods of teaching health.

Classroom Health Teaching and Surpevision of Health Practices.

Daily health teaching and supervision of the health practices of the children have been encouraged through a *Guide to Health Education,* which gives specific directions as to the teacher's procedures; through supervisory visits from the General Office staff; and through special instructions given during sectional institutes and teachers' meetings.

The curriculum of the elementary school provides for health teaching in connection with a combined course designated as language, conversational English, good manners and right conduct, civics, hygiene and sanitation. In the last year of the elementary school a course in physiology, hygiene and sanitation is given. Home economics in grades five, six, seven for girls, and gardening in grades three and six for boys, are important in health education because of their bearing upon the problems in nutrition which exist in the Philippines.

Dietary problems arise here in connection with food supply, customs and traditions regarding food, and ignorance of the principles which should guide in the right choice of foods for a properly balanced diet. The schools are helping to solve each of these problems. Gardening and poultry projects, which are a part of the curriculum, contribute to the food supply and encourage home industry in food production. The health instruction in every grade which emphasizes the eating of green leafy vegetables, fruits, unpolished rice and milk, and the specific information given in home economics regarding the principles which underlie the proper balancing of the diet, are slowly helping to break down habits which have grown up through ignorance and through the blind following of tradition.

School and First Aid Teachers.

Observation has shown that the most effective health work is being done, not in those places which have the largest number of nurses working in the schools, but in those where teachers, principals and supervisors have recognized the necessity of working with the nurse and the doctor and of making their work more effective through a system of follow-up involving a school clinic provided with simple remedies and a first aid teacher who has had some training in carrying on the treatment work started by the nurse.

The need for this first aid and remedial work in the school is occasioned by the frequent appearance of skin diseases and minor infections. In many places the distance to the public dispensary, the cost of transportation and the time involved in making the trip make it impossible for the child to get any treatment for these conditions. Since they are contagious and easily spread through the school when uncared for, and since relief is often a matter of a few consecutive treatments combined with educational work to improve the child's habits of living, it is feasible to provide this work in the school under proper direction. Furthermore, such a procedure tends to strengthen confidence in scientific treatment as it becomes more familiar, and is therefore educational.

To meet the need a plan was prepared with the approval of the medical and nursing authorities, which designates certain equipment and supplies for use in the school clinic and defines the work of the first aid teacher. Briefly the work of the first aid teacher is to continue, during the absence of the nurse, the treatments begun by the nurse; to do first aid work in connection with minor skin injuries; and to treat new cases of skin diseases which may appear in the classroom from time to time and with which she may have become familiar during the course of her work with the nurse. Any condition not easily recognized must be referred by the teacher to the health officials for diagnosis and treatment. Treatment other than that prescribed for the school clinic may not be undertaken by the first aid teacher, and drugs or medicines not authorized may not be administered.

A course for first aid teachers has been outlined and taught in summer sessions for the past three years. During this time approximately one thousand teachers have taken the work

voluntarily in order to qualify to serve in their respective schools. In addition to this training, the first aid teacher observes the work of the nurse in the clinic. The nurse sets up the clinic, arranges the supplies, shows the first aid teacher how to take proper care of the materials, and has her observe the giving of the simple treatments.

One first aid teacher is appointed by the principal for each school. The work is considered a part of her teaching schedule and is allowed for in making out the teaching program. Regular periods are scheduled for treatment and records kept to show the ailment, the treatment applied, and the dates of each treatment. The work is subject to inspection at any time by the health officers of the locality, and they are consulted when opportunity permits.

Most of the work done in the clinic consists in the treatment of scabies and the fungus skin diseases. Educational work is carried on in the classroom to encourage the formation of habits of cleanliness which are aids in checking skin diseases. In provinces where the work has been carried on for a period of years the physicians report a noticeable improvement in the amount of skin disease among school children.

One of the greatest values of this work in the school is educational. The amount of treatment which can be given under the circumstances is, of course, negligible. To train a child to take care of skin disease by keeping his skin clean, and to report to the clinic for treatment of skin diseases and of minor injuries is worth while. It is one way of encouraging confidence in the application of scientific treatment and of combating traditional reliance on the herbolario or witch doctor.

The organization of the school clinic and training of first aid teachers has made it possible for the nursing service to improve health conditions greatly, even in divisions where the nurse has under her supervision from five to eight thousand children.

The attempt to inaugurate a successful health program in the schools of the Philippine Islands involved a careful analysis of the problems existing, a study of the available facilities, and a definite plan for securing the coöperation of all the people who were able to contribute to the best use of these facilities. The results have been encouraging although not utopian.

GROWTH AND HEALTH

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THERE is obviously some relationship between growth and health. If the gardener finds his plants are not growing well, he tries to find out whether the soil is poor, whether the wrong kind of plant food has been used, or whether the plant is suffering from too little water or from the attack of some plant disease. The farmer judges the health of the domestic animals he is rearing largely by their growth. We watch the weight of infants and seek the cause of any interference with natural growth. We know that famine produces emaciation, that children and other young animals do not grow well unless the diet is adequate. It is natural that we who are concerned with the health of school children should seek to use the growth status of the child as an index of his health.

The first attempt to do this on a large scale was the use of height-weight tables to try to find out whether the child "weighed what he should." Doctors had customarily considered in examining children whether they were emaciated or obese. It was very natural, therefore, that an attempt should be made to make this examination an objective one.

Several sets of height-weight tables have been made. Those most extensively used have been the Baldwin-Wood height-weight-age tables. The hope was that by means of these tables we could find out whether a child was of the proper weight for his height and age. If he weighed too little or too much, it would be an indication that something was wrong and that something should be done to secure an improvement.

It is fortunate that such tables were prepared, because the campaign for the elimination of underweight resulted in securing attention to the health of thousands of school children who profited thereby, and the interest in underweight stimulated the development and improvement of school health programs in many communities. The establishment of the regular weighing of school children was one of the most profitable developments in child health promotion which we have known. We have not taken the weighing program out of the public schools. We believe the regular weighing of school children to be one of the most important elements in the health-education program, but this weighing program remains in modified form. Today we weigh children, as we always have, to interest them in growing and maintaining those healthful habits which contribute to growth, but we do not any longer use our growth records to diagnose nutritional status.

Why is it that the underweight status of a child or of a school population is not an index of its health status? In the first place, the tables

show the average weight of supposedly healthy children; they do not show "normal" weight. This means that children of different bodily proportions have their weights averaged and that the table does not at all indicate what any particular child should weigh. If we should average the weights of a group of six-months-old puppies, including Pekingese, Newfoundlands, bulldogs, wolfhounds, dachshunds and collies, we would not expect to secure a figure which would tell us the proper weight of any one of these varieties of dog at a given age. Clearly, we must think of the tables as giving us average weights, and never speak of the figures of a table as stating "normal" weight.

Studies carried on at the Massachusetts Institute of Technology during the twenties (reported at some length in the American Journal of Public Health, September, 1929) showed that the determination of a child's relationship to average weight is not precise or reliable. Different height-weight tables naturally give different averages. Whether John is up to weight depends upon what table is used. When a school system changes tables, it changes the percentage of underweight children in the school system.

If you weigh children with their shoes on one year and with their shoes off the next year, you will reduce the amount of underweight nearly one-half, because the shoes increase the height relatively more than the weight.

Moreover, we use rough measures, taking weight to the nearest pound, age to the nearest year, and height to the nearest inch. In a month a child may have to be reckoned as a year older. He may have gained only a quarter of an inch and yet have to be given credit for gaining an inch, because he has approached the next whole inch. He may have gained half a pound, and yet not have approached the next whole pound, so that for purposes of computation he weighs the same as he did a month earlier. Obviously he would appear to be much more underweight, although actually he might be a trifle stockier than the month before. The determination of the "percentage underweight" is so rough that this figure varies widely from month to month, and a child may go out of the "underweight group" or fall into the "underweight group" because of the crudity of the computation rather than because of the change in his bodily proportions. There is some seasonal fluctuation in the rate of growth of children. If heights are taken only two or three times a year, there is bound to be an increase in the number of underweight children when the new height is determined and used in the computation.

The Massachusetts Institute of Technology studies, conducted in Malden, showed clearly that a child's relation to average weight was not a reliable index to his health status, and that we could not compare the amount of underweight in different school systems, computed by different and changing methods, as a means of determining the healthfulness of the school population. Soon after the publication of the Malden studies, there appeared the investigation of the American Child Health Association, showing that the skeletal proportions of children varied so widely that we could not expect a constant relation-

ship between the height and weight of healthy children.

The other reason for weighing children has nothing to do with the attempt to diagnose the child's health or nutritional status. The regular weighing of children has been found to be one of the best, if not the best single incentive toward healthful living. Once children are interested in growing and have a chance to watch their growth, they become interested in doing the things which will make them grow. The desire to grow is sufficient reason for going into training for health. It seems eminently desirable for the classroom teacher to weigh her children every month and for the home to be notified of the child's weight and the amount of gain.

This plan places emphasis on regular and continued growth. We should not expect a child to make a gain every month in the year, however. Our study of a thousand children between six and twelve years of age in the Malden public schools indicated that over 98 per cent of the children failed to gain at some one of the monthly weighings. Less than 20 per cent of these children failed to gain for as long as a three-month interval, however. We have compared a group of 95 children who failed to gain over a three-month period with a group of children who were gaining each month. Our studies showed that the former group were distinctly inferior to the latter in respect to dietary and other health habits, the number and seriousness of physical defects, and the amount of recent illness. The number of children in the first group having combinations of these deficiencies was strikingly greater, as shown in the following table:

TABLE I.

Comparison of Group I and Group II in Terms of Physical Defects, Faulty Habits, Illnesses, and Combinations of These Health Deficiencies.

HEALTH DEFICIENCY	No. of Children Group I (Not Gaining)	Group II (Gaining)
None observed	4	17
Defective teeth and one faulty habit only	18	24
Two or more faulty habits only	8	6
Illness only	27	36
Physical defects only	4	9
Poor habits and illness	12	4
Poor habits and physical defects	8	1
Illness and physical defects	8	2
Poor habits, illness, and physical defects	6	1
Total number of children	95	100

More recently, we have completed some as yet unpublished studies comparing children who have gained less than two pounds during the twelve-month period with children who have made an average gain. We find similar comparisons here.

We are led to believe from these investigations that it is worth while to give individual attention to those children who in September are found to have gained less than two pounds during the preceding year, and during the school year to those children who have stopped growing for three months or longer. Such an investigation involves an inquiry by the teacher or nurse into the health habits and recent illness of the children. If no explanation for the poor growth is found here, or if for some other reason it seems desirable, a child is referred to the

school physician for a further examination.

We do not believe that this is a perfect screening process. Many children need individual attention who will not be picked up in this way. We do not expect to find something seriously wrong with each of these children, but they do show a sufficiently poorer record to make it well worth while to give them individual attention.

Conclusions

1. It is not scientifically sound to use underweight as a diagnosis of the health or nutritional status of a child or of a group of children.

2. It is desirable to weigh children monthly and measure them two or three times a year, in order that the opportunity to watch their growth may stimulate them to improvement in their health habits.

3. The record of habits, sickness, and physical defects among children who grow poorly or intermittently makes it seem worth while to give individual attention to children who have gained less than two pounds for the year and who have not gained for a period of three months or more.

Further experience is needed to determine the exact value of these recommended procedures.

PHYSICAL EDUCATION—ONE IMPORTANT FACTOR IN HEALTH EDUCATION

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AT first glance this title may seem to have a limiting quality. This is because there is a confusion as to whether physical education includes health education or health education includes physical education, or whether they should be considered as two separate factors in a school health program.

If we could do away with "subjects" and think, talk and write in terms of education, we would find that we are all working for "the gradual development of the fine personality and the identification of the individual with society." [1] In our efforts to seal our educational compartments and give to each one its proper label, we have somehow lost sight of the larger meanings of the labels. Here is no attempt to set up a nomenclature or to enter into the administrative problems, but rather to study the program content in physical education for its health potentialities, and to indicate how it may be appraised in action. Aims, objectives and policies of the activity program were admirably discussed in the April, 1933, issue of EDUCATION, and we constantly find discussions among physical educators as to the relative importance of objectives. The

1 Prof. Katzaroff in The New Era in Home and School, October, 1933.

following list is taken from a recent study[2] of books and periodicals and is placed in rank order with frequency of mention as criteria:

Table

Ranking of Modern Objectives

1. Character Development
2. Organic Development
3. Neuro-muscular Development
4. Leisure time activities
5. Development of Appreciations
6. Intellectual Development
7. Posture
8. Correction of Body Defects

When referring to the "Health Objectives" of physical education it is customary to single out Organic Development, Posture, and Correction of Body Defects, but for the moment we shall consider that all of the objectives in the above list have contributions to offer to an integrated health program. It does not seem important to say that one counts more than the others, but rather that all are necessary if an individual is to make the most of his physical education opportunities in the school, home, and community.

Dr. Frederick Rand Rogers[3] pointed out how physical education through properly directed large muscle activity can conserve health and can raise the level of the physical vitality of children. With this fact granted, the next step is to recognize a "properly directed large muscle activity." Two physical educators may have identical standards, carefully worded and set down on paper, including for instance all of the eight objectives in the above list. The characteristics of these two programs may, however, be so different that there is a wide discrepancy in reaching the standards in one, while the other is at least "on the way." In a report[4] of the work of a Committee of the American Physical Education Association on Teacher-Training in Physical Education in the United States, fifteen characteristics of an ideal program are listed as follows:

(1) Well-planned general and specific objectives, which are physical, mental, and social in nature.

(2) One hundred per cent of the pupils enrolled are involved in the program.

(3) Determination of individual differences through pupil examination.

(4) A diversified program of activities.

(5) An activity program graded as to difficulty.

(6) A program adapted to the needs, capacities, and interests of the individuals participating.

(7) A program of prevention, improvement, and correction of physical defects.

(8) The classification of children into groups.

(9) Careful development of knowledge and attitudes.

(10) The use of all free periods for physical education purposes.

(11) Adequate play areas, equipment, and supplies.

(12) Use of selected types of commercial equipment properly installed on school playgrounds.

(13) Provisions for safety of children.

(14 Keeping a useful set of records.

(15) The testing of pupil achievement.

Each of these characteristics has its health implication and we will look

2 Modern Objectives of Physical Education in the United States, p. 24. By Constance Nelson. Bulletin 1933-1934. Graduate Department of Hygiene and Physical Education, Wellesley College.

3 The Relation of Physical Education to the Health Aim. By Frederick Rand Rogers, Ph.D., from Education, April, 1933, pp. 449-453.

4 Research Quarterly of the American Physical Education Association, Vol. 4, March, 1933, page 56.

for evidence of these health values in a specific situation. Suppose that two principals decide to have their boys play a friendly interschool game of basketball with the first characteristic on this list a conscious part of the plans. If you stood on the side lines to watch the game, what would be the evidences that this conscious plan had amounted to something? On the physical side it is not enough to say, "These boys all look sturdy and well." The school should know, through its records of physical examinations and follow-up, that there is no immediate reason why any boy on the team should not make the physical exertion necessary to good performance in a highly organized competitive game. This includes stability under emotional strain. There should also be in evidence all of the necessary precautions against accident and proper protection in case of emergencies.

On the mental side, every boy should thoroughly understand the rules of the game. He should also be able to make decisions for himself while playing the game and not rely upon coaching from the side lines or between quarters. If there is educational value in such a situation there should be no effort at domination by adults either before or during the game. On the social side, we touch upon the values always claimed for competitive games, and are looking for signs of good sportsmanship in the actions of the boys. There may be a wonderful code displayed on the walls of the school and sung from its platforms, but what the boys do on their own initiative in a difficult situation is what counts. Sportsmanlike behavior before the game includes hospitality and sociability, and here the captain should take the lead. A more difficult part of his behavior comes when he makes a legitimate protest. He should be able to do it in a gentlemanly manner and without loss of temper. If his team loses, he should be able to congratulate the other captain sincerely. If he is a winner, he can discuss the game with the other captain and congratulate him upon the pluck of the losers. The players should let their captain speak for them. They have opportunities to show friendliness to opponents and they should give up their places to substitutes cheerfully.

If social values are to be gained by the children, the teachers and spectators must enter into the educational spirit of the situation. Both teachers and neighborhoods can keep alive an ancient grudge that started before these children were born, and can make it a live issue to the children. Teachers and spectators can get so excited that they actually interfere with the game and by crying out against official decisions they influence the children. We talk of coöperation between home, school and community. Behavior during a school function should be included in the responsibility of the educational part of this triangle.

These few indications are illustrative of how an activity may function in the lives of participants, and it is evident that the winning of the game is of minor importance to the educational observer. But he must not forget that it is of major importance, and rightly so, to the children. The characteristics for which we are looking are of significance to the adult, but knowingly they matter very little

to the child. If he is made too conscious of them, he becomes self-centred, neurotic, and a prig. They can, however, be made a natural and almost unconscious part of his behavior.

In team games we have an unusual opportunity to influence for better or worse the physical, mental, social and emotional attributes of the players and in part at least of the onlookers. There naturally is overlapping and the chance for controversy of opinion in such a classification, but a few examples are illustrative. The physical attributes are familiar, such as: endurance, flexibility, poise, muscular strength, motor control, and the ability to express ideas through action. Mental attributes include: the ability to make quick and accurate judgments, the ability to give a quick response to a stimulus, having a definite goal of accomplishment, having initiative and originality. Social attributes include: coöperation, leadership, loyalty, and self-appraisal. On the emotional side, we may list: control of temper, enthsiasm, pleasure in achievement.

These specific suggestions may be applied to everyday class work in the gymnasium or on the play-field. If we use the small squad method in a crowded class, we may get the best results if we find evidences of these best characteristics. We look first to see if every child is actually playing. It is possible, with careful planning and with coöperation from the pupils, for a class of fifty to one hundred, in squads of ten, in a good-sized gymnasium or play-field, to carry on satisfying vigorous activities. To the onlooker it may look and sound like confusion, but if the running, jumping, throwing, catching and calling are all purposeful and necessary to the activities, it is order of the best kind. It is only unnecessary movement and noise that throws it into confusion. In such an organization every child should have a chance to lead his squad, not the best ones day after day. Each child should know well ahead when his turn at leadership is coming, so that he will prepare for it rather than be a failure. All squads may be working on the same or on different activities, but the point is that every one is busy most of the time.

When an administrator gets satisfaction from seeing straight lines of children patiently waiting their turns, while perhaps ten others are performing, let him time an individual child with a stop watch to find out what proportion of a thirty-minute period is used by this child in action. Is pride in orderliness in such a type of discipline justified in the light of our objectives? It does not seem to help the individual child in relation to any one of the eight listed.

One hundred children of any age can learn to come into a gymnasium in an orderly way without wasting time in straight lines, and they can find their own equipment, organize their squads,and start their own activities as easily and quickly as if they found their places by chalk lines and stood waiting for someone to put the balls in their hands and blow a whistle.

Suppose a principal who has never danced a step in his life wishes to appraise a dancing lesson in the primary grades. He certainly could answer the following questions:

a. Is dancing joyous, natural, and free from artificiality?
b. Is a dance taught? (Not steps.)

c. Are the dancers reviewed sufficiently often for them to become fixed in the minds of the children?
d. In the animal rhythms are the movements true to life, i. e., do the children walk like ducks, elephants, etc.?
e. Does the teacher supply the proper setting for a folk dance, telling the children the nationality of the dance and something of the country from which it comes?
f. Is the emphasis placed upon spirit rather than on technique?[5]

There is not space in this article to weigh and measure the vexing question of participation of girls in athletics. A pamphlet on this subject has recently been issued by the National Education Association. This pamphlet is a digest of principles and policies, made from a study of present trends among school authorities. Its title is "Athletics for Girls," and it may be secured from J. E. Rogers, Secretary of the Department of Health and Physical Education of the National Education Association, 315 Fourth Avenue, New York City.

There is a wealth of material of value to the general educator in the unpublished "Report of the Sub-Committee on Physical Education in Schools" of the White House Conference on Child Health and Protection. The following quotation is of special value to this article:

"Physical education is a tool of education used to provide opportunity for psycho-motor activity. Through the successful participation in these activities certain desirable results may be obtained as follows:

1. Physical growth and development is the logical outcome of a well-organized program of physical education. The achievement of this aim flows as a by-product of the activity and is not the immediate objective of the child.

2. A desirable resultant of physical education is that it should possess a carry-over value, so that participation in these activities or in similar ones may be assured out of school.

3. Activities in a physical education program should appeal to the instinctive mechanisms of the age group. The desire for competition, group loyalty, and other traits which characterize the early adolescent period, need to be utilized.

4. A satisfactory physical education program must enable the individual to act as one of a social group. The complexities of modern civilization are so great that group action takes precedence over individualistic responses. Physical education activities provide invaluable situations for the exercise and inculcation of mental and social traits of importance in the development of character and personality." (p. 19)

To become a part of a functioning school health program, physical education will first realize that it is only a part and by no means the whole story. It must also see clearly that its activities cannot be classified according to objectives. It cannot say, "Today we will emphasize health by entering into such and such activities, and tomorrow we will play such and such a game in order to bring out good character traits, also to win the championship, even if——" There should be no alternative when we are engaged in an activity which is concerned with the physical, mental, social and emotional growth and development of a sound and free personality.

5 Play Activities for Elementary Schools, p. 26. By Dorothy La Salle. A. S. Barnes and Company, New York.

CLASSROOM FILMS IN HEALTH TEACHING

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EDUCATIONAL films for schools may be classified under two headings: auditorium films, and classroom films. While many features are common to both groups, there are certain fundamental differences between them. Auditorium films are adapted for showing to a mixed audience. In general, they are dramatic in character, have considerable entertainment value, and the stories they tell are complete in themselves. Classroom films, while they may be dramatic, entertaining, and complete in themselves, are designed primarily to supplement, enrich, and vivify graded classroom instruction. In this discussion, attention will be centered upon the values of classroom films in health instruction, and upon suggestions for their effective use.

The ends in view, whether in teaching or in any other purposeful activity, determine the ways and means to be employed. It follows that a clear-cut conception of the aims of health instruction is essential to sound conclusions relative to the value and use of classroom films in that field of teaching. The ultimate aim of health instruction is, obviously, the maintenance of health. The commonly accepted objectives which contribute to that ultimate aim are: to develop effective attitudes towards health and health practices, to establish useful health habits, and to promote the acquisition of accurate knowledge as the basis for an edequate understanding of health conditions and health behavior.

The teaching problem in the lower grades is to provide motivation for health practices, which will lead to a growing awareness of the importance of health and a gradual establishment of habits that function regularly and automatically. At this level, attention is focused, primarily, upon the "how" of health behavior.

The teaching problem in the upper grades is to sustain and extend the attitudes and habits initiated in the lower grades. In addition, as the interests of the child expand and his abilities develop, more and more attention is given to the acquisition of health knowledge. This knowledge serves as a basis for an understanding of the "why" of health practices. At first the knowledge acquired is applied to trace the *consequences* of practices in connection with food, care of teeth, posture, and other items of health behavior. As the child matures, his attention may be directed to trace the *causes* back of conditions, and to test the reasonableness of practices, to the end that health behavior in adult life may be intelligent and responsive.

Let us now turn our attention to a brief consideration of the means of attaining the objectives of health instruction. In the health teaching program, the child's participation is of paramount importance, and we are concerned with providing opportunities for pupil activity and with pre-

senting instructional material which will motivate the child to action. In planning health instruction, the teacher aims to challenge the child's interest, to focus his attention on the matter in hand, and to provide him with impressions that are direct, vivid, rapidly acquired and accurate. Furthermore, every available medium is used to build up a growing body of health ideas, adapted in complexity to the child's developing interests and abilities, and leading ultimately to an understanding of the causes underlying health behavior.

Of the various media of instruction used in schools, verbal language, spoken and written, is by far the most prominent. It is quite proper that this should be so, since words are employed throughout life for purposes of communication. To deprecate the use of verbal language in teaching would be to disparage the value of speech—one of the distinguishing marks which set man apart from the other animals. However, it is now recognized that words are limited in their capacity to express and to transmit ideas. Experiments, demonstrations, objective materials, charts, diagrams, maps and pictures are widely used to compensate for the limitations of verbal language, and to enrich it. Of these compensating devices, the classroom film is one of the most useful and effective.

Visual impressions from a classroom film are more immediate and direct than verbal ones. Consider, for example, the difficulty of leading children to understand that the teeth develop slowly within the jaw, that they grow and erupt in a definite order, and that this process of tooth development goes on continuously throughout childhood. In a classroom film designed to show the growth of the teeth, children can get a direct picture of this process taking place. By means of animated diagrams, supplemented by pictures of children at selected ages, it is possible to show the growth of the teeth from the time a child is born until the last permanent tooth comes through the gums.

Visual impressions are more vivid than verbal ones. Children are naturally interested in animals, and they will usually give a fair degree of attention to reading or hearing about animal-feeding experiments which demonstrate the value of particular foods in relation to growth. Seeing such an experiment, however, is vastly more vivid. They actually see the animals on the screen, in connection with a controlled experiment carried on by the children. They see the routine care of the white rats, the measuring of the food supplies, the regular weighing of the animals, and the plotting of the weight graph. They can observe the results for themselves. They see that the milk-fed rat grows faster and is better-looking and more alert. Such a picture may well serve as an introduction to the conduct of a similar experiment, in which case it provides the children with a clear understanding of modes of procedure. Where time and equipment are lacking, the film offers an excellent substitute for having the children conduct the experiment themselves.

Visual impressions are more rapidly acquired than verbal ones. To realize this in a striking way, one has only to estimate the reading time required to get a body of information about the making of antitoxin which would be

equivalent to that acquired in four or five minutes from seeing the various procedures on the screen. In these few minutes we can see all the important steps from the time the diphtheria bacilli are "planted" on broth culture medium until the antitoxin is bottled, ready for use.

Visual impressions are more accurate than verbal ones. In any oral or written description, the words heard or read must be translated into an appropriate impression of that for which they stand. Here is abundant room for inaccuracies. More significant still, in a verbal description the elements involved must be presented one by one. It remains for the recipient to recombine the elements and make a mental reconstruction of the whole. Each child may make mistakes in translating individual words into accurate ideas, and there are likely to be differences in the way various children reconstruct the whole. As a consequence, the teacher finds it necessary to devote more or less time to correct errors in translation and reconstruction. In this matter of accuracy of impressions, both as to details and as to the whole, compare reading about such a subject as the purification of sewage by Imhoff tank and sprinkling filter with seeing the process shown by photography and animated diagrams in a motion picture.

Visual impressions are richer in context than verbal ones. For example, in a classroom film about tuberculosis, there is a section which shows a day's routine in an attractive preventorium for children. When words are used to describe life at a preventorium, the process is abstracted from its setting. In the film, however, we see the children in attractive surroundings, going through the activities of a happy day. There is a vivid impression of sunshine, fresh air and cleanliness. We see what the children eat at mealtime, we watch them as they take their afternoon rest on the outdoor porch, and so on through the day until they go through their cleaning-up program at night and jump into bed early for a long night's sleep.

Visual and other sensory impressions must be acquired before words which refer to them carry appropriate meanings to the reader or hearer. This fact is recognized, consciously or unconsciously, every time a teacher uses specimens, makes a demonstration, directs an experiment, or conducts a trip to field, shop or store. Classroom films give visual experience with representations of objects in motion, and thus add directly to the equipment of new ideas. This is well illustrated by material in a film on circulation. The facts about the circulatory system are difficult for the child to comprehend because sensory impressions are lacking and he must try to construct ideas from descriptions in words supplemented by still pictures and diagrams. In the film he sees, in micro-photography, the actual flow of blood through arteries, capillaries and veins (in a chick embryo). He can see for himself that the blood pulses through the artery, and that it flows evenly through the vein. In the higher magnification of the capillary, he can see the blood corpuscles clearly as they are carried along in the blood stream.

In many instances, a film may serve as a substitute for a field trip. Field trips bring children first-hand and up-to-date experience, and each child, in

the course of his school life, should have opportunity to study a limited number of situations directly on the ground. But field trips are time-consuming and disorganizing to the school program, and it is out of the question to visit all the places that would contribute important elements to the child's understanding of conditions and practices related to personal and community health. Films about such subjects as water supply, waste disposal, dairying, food production and food manufacture, supply visual experience which is similar to that gained by first-hand observation in the field. Such material is extremely valuable for children who have no opportunity for direct experience, and it provides enrichment of understanding for those who have some opportunity to make first-hand investigations in their own communities.

Films are in some respects superior to many field trips. In the making of a film, essential features are selected and arranged to give a comprehensive view of the situation, while accidental relations and inconsequential details are eliminated. In some situations, a climb into the rafters of a building or a trip in an airplane may be necessary to get a view of the significant action. These procedures are obviously impossible for a class in the field, but children may sit in the classroom and see in a few minutes on the screen the results of hours of work on the part of the cameraman in bridging the difficulties and thereby presenting to them a clear view of the situation. Moreover, many operations occur completely out of sight, but in the film animated drawings can be inserted to show the working of these hidden parts.

Films can bring to the student much illuminating, pertinent knowledge from the fields of laboratory experiment, microscopic study and the like, that would not otherwise be available in most schools. Children can see for themselves the life history of the mosquito. They see the larva come out of the egg, the pupa emerge from the larval shell, and finally the fully developed mosquito as it forces its way through a crack in the pupal case. They can see on the screen experiments showing the nature of muscle contraction and muscle fatigue, although they could not readily conduct such experiments in their own classrooms.

Moreover, by use of animated diagrams, stop motion and other devices peculiar to the motion picture, it is possible to show clearly many processes which cannot otherwise be visualized for the child. In connection with circulation, the child can see by animated diagram the course of the blood as it flows from the heart out through the arteries to all parts of the body, and returns to the heart through the veins. Animated diagrams also provide him with a visual representation of the giving up of food and oxygen from the blood stream to the body tissues, and the return of wastes from the tissues of the blood. The nature of bacterial growth is shown vividly on the screen by the use of micro-photography and stop motion. We can watch the individual bacteria as they grow, divide and spread out in a rapidly increasing mass to fill the field.

The contributions which classroom films may be reasonably expected to

make to health instruction amply justify teachers in giving serious consideration to effective ways of using them. Common sense indicates that the fundamental features of good teaching practice are the same, no matter what media of instruction are used. The complete procedure involves the establishment of an initial interest, a fixation of attention upon the subject to be considered, the noting of pertinent facts, an interpretation of the meaning of the facts, and an integration of the new with the old.

So far as interest goes, classroom films start off with an initial advantage. Children like to see motion pictures. However, while interest is prerequisite to paying attention, the amount of interest children display in a film is no measure of the extent to which it contributes to the aims of instruction at that time. An important function of the teacher is to make an approach to the film which fixes attention upon the pertient facts to be noted.

With young children, suitable films are short enough to fall within their span of attention, and present actors and actions so simple and obvious that little or no preliminary fixation of attention is required. In such cases, the "approach" omitted, the children will note the pertinent facts in seeing the film, and the teacher will devote attention to the translation, by the children, of the observed facts into the language and practices of the child. In short films on such subjects as cleanliness and good foods, for example, the child has an opportunity to observe the habits of animals, and to watch children as they engage happily in the correct performance of various items of desired health behavior. These films are designed to provide the teacher with objective material from which to develop pupil activities that will serve to motivate the child's own health practices.

The subject matter of instruction becomes progressively more complex as children mature. Films suitable for older pupils present a wide range of the pertinent facts in their setting, and the children may observe these from many different viewpoints. It devolves upon the teacher, therefore, to so direct attention, before screening, that the children will note the pertinent facts as the film is shown. In general, attention will be directed towards such matters as: "What is it like?" "How does it work?" "What is its purpose?" or "Look for evidence that . . ." A film which is rich in materials competing for attention puts a severe strain upon the child's ability to hold his attention to the important items, and the amount of film shown at one screening, therefore. should be short enough for him to follow it through without undue wandering from the points in hand. Many classroom films are divided into short units which are complete in themselves and which are short enough to fall within the pupil's span of attention.

It is worth while to note here that the eye, with practice, grows more skillful in performing essentials, just as the hand, with practice, grows more skillful in performing operations. This ability to discriminate between the significant and the insignificant, among the many things seen, is no mean achievement in itself. It is an ability that grows with exercise, and classroom films furnish an excellent

medium for its development. Moreover, the results attained from classroom films are cumulative in quantity and quality as teacher and taught develop a growing skill in using them.

During the screening of a film it is to be presumed that the children are busy noting the pertinent facts, and the teacher will do well to refrain from comments. This is the practice followed when children are engaged in silent reading. Any required directions are given before the reading, and results are checked after the reading is done. The considerations justifying that practice in reading apply with equal force to the situation in which children are "reading" the picture on the screen. A growing ability to follow directions is one of the outcomes of good teaching. In case the teacher suspects that the directions are not being followed, there is no more reason to suppose that children can follow a motion picture while the teacher is talking, than to suppose that they can read and listen at the same time. The teacher may stop the reading or the film, as the case may be, make necessary comments, and then let the children go on. After the check-up, additional comments may be made and, if necessary, the text re-read or the picture screened again.

Because of the varying richness and difficulty of comprehension in the materials of classroom films for health instruction, no set rule can be made as to the amount of film to be shown or as to exact procedure in placing the film in relation to other media of classroom instruction. In subjects where the entire film will not tax the attention of pupils too severely, the film may well be shown first as a whole, and at later periods successive sections may be screened again for more detailed study. In other cases, the subject matter of the film may be so rich in new materials that pupils cannot pay attention to or profit from a showing of the complete film at first. Under such circumstances, the teacher will prefer to use one unit at a time for study, and then show the entire film after the children have had an opportunity to "digest" the ideas and have developed to a stage of understanding where they can view the subject as a whole.

We have tried to show in this discussion some of the ways in which classroom films may enrich the health teaching program, and to indicate some of the principles to be observed in the effective use of films for teaching purposes. We recognize that there are many mechanical difficulties to be overcome by teachers in using films, and that much time is involved in becoming acquainted with available films and fitting them into the teaching program. Indeed, it has been aptly said that "the use of films is not likely to make teaching easier for teachers or to render study painless for pupils." It is reasonably certain, however, that teachers who can secure films and are willing to learn how to use them will find themselves amply repaid by the noteworthy contribution that classroom films can make to health teaching.

BASIC CONSIDERATIONS OF THE COURSE OF STUDY IN HEALTH EDUCATION

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THE need of a well-planned course of study as a part of a uniform health education program is evident from the fact that health instruction and training are now required in forty-four states by law. Thus the course of study, the guide to health instruction and training, becomes perhaps the greatest single factor in the Health Education program. It is the nucleus around which is grouped the other factors necessary for program growth. The general objectives and principles underlying the health course of study for the elementary and secondary grades will be herewith discussed. Until recently the secondary grades have been neglected, although the elementary unit has received some attention. The situation may be due almost wholly to the recent change in educational organization from the 8—4 to the 6—3—3 plan. In the organization of the curricula to fit this change more attention has been given to the traditional fields. But, of late, educators and curriculum makers have been making studies approaching the subject from different angles according to the age of the pupils.

The course in health instruction and training should be graded, with a progressive sequence. It should be based on psychological and biological principles; in other words, it should harmonize with the general objectives of education. Based on these elements, the following is suggested as the basis of the entire course of study for the primary, elementary and secondary grades. The laws of learning are applied to health teaching in order to strengthen the knowledge.

The Primary Grades

Let us consider first the native equipment of the child in the primary grade. In the early primary stage the child imitates, dramatizes in a simple way, may have a vivid imagination, likes to make believe, is curious, and asks many questions. At this stage the child is likely to be selfish, and is usually not self-conscious. Since this is the period when the pronoun "I" is the most important, it is not the time for competition or compulsion. It is the time for the type of experiences that include the use of the whole body.

In the late primary stage the child is in the collective age. Imitation continues but make believe fades. Questioning is more purposeful. The dramatic instinct continues, and interest in competition begins. The child is less likely to be selfish. Often the teacher of this age level is puzzled or impatient at what she is likely to term the laziness of an apparently strong, growing boy, unmindful that at this

stage the internal organs are not growing so rapidly as the exterior of the body. The child's muscles crave exercise and soon tire the heart which has not yet developed proportionately. Permanent teeth are appearing. The child is able to control the smaller muscles of his fingers. At this period children are more anxious for approval and will practice health habits because they are praised.

On the basis of the foregoing it is suggested that the elements of the primary grades should be so formulated as to (1) establish health habits, (2) develop self-control, and (3) develop feeling of responsibility for one's own health practices. The chief activity is habit training. The habit training should be closely interwoven throughout the school day on an applied and informal basis. Almost everything children do in ordinary work in the lower grades offers opportunity for including health training. Activities covering their total learning needs, informal discussions and dramatizations may properly include the practical health factors. Mental and moral habits should be included with the physical, such as habits of truth, frankness, kindness, service, coöperation and friendliness. The amount of knowledge given is unimportant, for children in the primary grades are little interested in the laws of health in the abstract. They need positive and definite instruction given in such a way that they will at once desire to put the instruction into practice.

The Middle Grades

The second phase to consider is the native equipment of the growing child of the middle grades. These grades are a time of hero worship. The fighting instinct is appearing, with the desire to show off. Children still desire approval, but from their peers rather than from adults. Interest in construction, coöperations, and team play is quite evident. During this period, the internal organs have not yet increased in size in proportion to the growth of the body. The heart is still too small and weak for the type of exercise and work often put upon it. Metabolism is likely to be faulty, since less food and oxygen are absorbed. This often accounts for the restlessness and irritability of this age. The fighting instinct, the desire to show off, and team play may be allowed to let off steam in contests, directed play, construction in more detail and clean-up campaigns. Hero worship may be directed into studies of health heroes.

As a result of this study it is suggested that the middle grades continue to use informal teaching and add regular periods for definite health teaching. Motivations and devices must be strictly adapted to age and interests, and developed through individual and group projects and problems. The health program must be a definite and natural part of the total program of education in the child's mind, giving him the balanced concept of the relation of healthy living to all other parts of living and learning.

It is well in the middle grades to teach by illustration and comparison. The use of simple analogy in terms of the automobile, house or engine, is to be preferred to technical and anatomical terms.

Health knowledge becomes a definite part of the health program in so

far as it explains in a simple manner desirable health habits. Children at this age should not be required to perform acts blindly. It is at this time that they should begin to evaluate health information in order that they may reason for themselves what health practices are best, and not perform them simply because of tradition, superstition, or coercion.

The teacher must guide the program so that knowledge should not be emphasized at the expense of habit formation.

The Secondary Schools

The third phase in considering the native equipment of the growing child in relation to the course of health instruction and training is concerned with the secondary schools.

The junior and senior high school age is a period when youth takes himself seriously. He is given to self-analysis, introspection and adult opinions. This is often called a period of storm and stress. However, a large per cent of normal, healthy children of normal parents pass through this period as naturally as any other. It is a time of day dreaming, idealism, self-consciousness and sensitiveness to ridicule. Coöperation is more marked, reasoning power is increased.

During this period there is increased growth in the internal organs and greater development of the heart and lungs. Circulation and digestion are not so established as they will be later on. Often posture is not good and nervous disorders are in evidence. Tuberculosis starts its great inroads here. Considerably more scientific health information should be given to strengthen health habits, and desirable health practices should be established for life at this stage.

A thoughtful, patient teacher can work wonders at this period. A realization of the part good health and clean living play in the life of the youth and future adult can be instilled because of the increased reasoning power. For this same reason, considerable more knowledge can be taught.

The history of preventive medicine is replete with examples of men and women who made heroic sacrifices in the cause of humanity, such as Trudeau and Walter Reed and Florence Nightingale. Such stirring biographies set up ideals of splendid manhood and womanhood. More of them should be authentically but entertainingly woven into plots for visual material. Such inspiration gives reality to the day-dreaming of this period. The tendency for self-analysis can be used to encourage girls and boys to consider their own habits and to improve them.

The marked desire for organization and coöperation can find outlet in health clubs and student councils, if they are of a definite nature, with a definite purpose. These can be school health councils or clubs which give practice in home nursing, life saving and first aid, or, clubs which encourage field trips. These activities should be guided by a teacher who, without seeming to interfere, can still see that they progress along beneficial lines, that all members share in them, and that they do not degenerate into lawlessness for lack of material to hold their interest and to stimulate them to further study.

The junior high school student may still need emphasis on some habits.

This may be due in part to the problems of the children in adjusting themselves to a new environment and new type of daily program, such as the responsibility of choosing their own menus, the shortened lunch period, and the mental hygiene of departmental work.

The student should learn the physical limitations of the human body and the value of knowing one's individual limitations and living within them. Budgeting time should be a real unit in the course of study.

Appreciably more scientific information should be given to pupils in junior high schools than to the pupils in the lower grades. Structure and functions of the body should be taught in simple terms, always based on health needs, not knowledge for itself. Pupils should be also given by means of concrete illustrations an increasing ideal of public health and sanitation and their responsibilities for the health of others as well.

Some objections have been made to teaching the same phases of health in different grades. These objections are often justly made. Continued emphasis on the same subject would bore the most interested person. However, it is often necessary to discuss the same subject in succeeding grades, since the broadened experience of the child adds new light to the subject. When this is necessary, the topic should be approached from different angles. For example, take the study of nutrition. The subject of food lends itself to the consideration of the following phases: selection of balanced meals, care of food in the home, preparation of school lunch, menus for the home, pasteurization of milk, food laws, etc.

Many persons today are saying that there is a serious breakdown during the senior high school life of health habits formed in the earlier grades. It is true that this problem merits consideration. Informal health teaching, regular health teaching periods, consideration in health activities as well as in all classroom procedures should give the knowledge, training and experience that will produce at this period the intelligent self-direction that is our main objective. In the regular teaching period scientific facts should be taught. This scientific foundation should enable the pupil when he reaches maturity to decide all health problems upon a rational basis. It is evident that the organization of these scientific facts requires definite utilization of the course of study.

Although good practice allows the teacher freedom with limitations in working out the course of study, there is no good educational argument for various health curricula for different regions. Local adaptation of the curriculum is fine for methods, but not so far as objectives are concerned. Prevention of specific ailments, such as goitre, may need more emphasis in Cleveland, or hookworm prevention more attention in Alabama than in other places. Hygiene of sunshine may need far less emphasis on behalf of rural than city residents.

Physiology taught in connection with the correction of physical defects, the prevention of communicable diseases where a knowledge of the body and its functions is necessary for a better understanding of the problem, is more effective than when taught topic by topic from a textbook.

When teaching first aid, one actual

demonstration may be much better than any amount of reading or studying of the subject. For instance, the time to demonstrate resuscitation from drowning might be in early winter, when there is danger of thin ice, or in spring, when the swimming fever is on, or just before the long summer vacation, when a high percentage of the boys and girls go swimming.

Laws of Learning in Relation to the Course of Study

In addition to the psychological and biological basis of the course, it is necessary to consider the laws of learning in relation to knowledge, habits and attitudes. The laws of learning are just as essential in health teaching as in all other teaching.

The psychology of habit formation includes, among other points, consideration of the following:

1. Launch the habit well by repetition of correct practice.
2. Give opportunities for practicing needed health habits.
3. Give practice in life-like situations.
4. Encourage imitation of peers as well as teacher.
5. Be specific and concrete.
6. Give pupils concrete evidence of progress by keeping records.
7. Recognize progress by some form of approbation.
8. Enlist pupils' effort, initiative and responsibility.

The psychological principles for health knowledge include the following:

1. Facts collected should be of vital concern.
2. Facts should be presented in a medium of pupil activity.
3. Opportunity should be provided for using information and applying knowledge to real situations.
4. Broad associations should be formed to function effectively in all life.
5. Facts taught should be scientifically correct.
6. Teaching should be by means of the positive approach.

The forming of correct attitudes toward health is equally important. The results of teaching are lasting always in proportion to the attitudes formed, therefore attitudes need constant consideration. The psychology of attitude formation includes the following:

1. Satisfaction and incentives should be inherent in the habit if the habit is to be permanent.
2. Favorable attitudes toward the desirable and unfavorable attitudes toward the undesirable need to be stressed.

In considering the elements of the course of study built on the biological and psychological basis and the laws of learning, the ratio emphasis to be placed on habits and knowledge should also be included. Habit formation is all important in the primary grades with a minimum of knowledge. Emphasis upon the former decreases while the latter increases up the scale to the senior high school.

In general, the trend of the course of study should in the primary grades emphasize habits through practice; in the middle grades continue health practices, but begin teaching the underlying principles suggested; in the junior and senior high school still emphasize the needed habits and make underlying principles more evident and more scientific, with the activity and knowledge branching out into community problems.

EDUCATION *VERSUS* THE MARKING SYSTEM

The Case for the Elimination of the Traditional Report Card

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I.

THE general abandonment of corporal punishment as a means of promoting scholastic activity has been one of the most promising developments in practical pedagogy since 1900. Dunce caps, leather straps and raw-hide whips have disappeared and the ruler is no longer a weapon to be feared. But these changes are in method rather than effect. In truth, the old pedagogy of force remains in a new and more effective guise; for grades and marks, prizes, honors, medals, degrees and other paraphernalia of extrinsic motivation are devised to perform services which birch whips formerly accomplished.

Quite recently, however, progressive educators have led a growing movement away from the traditional marking system, which rates pupil accomplishments in terms of A, B, C, D, etc., or Excellent, Good, Fair, Poor, etc., or 100%, 99%, 98%, etc. Actual innovations vary from reports of progress in terms of absolute accomplishments used in the Dalton plan or the Bronxville (New York) Public Schools to the practical elimination of report cards in the Cora Williams Institute (Berkeley, California) and Newton (Massachusetts) Public Schools. Chicago University has reduced all marks to two or three; and New York University, after a transitional period during which three marks were used, eliminated the honor grade, retaining only "pass" and "fail."

Which is the wiser policy: a plethora of marks or their reduction almost to nil? A growing literature points clearly to the second course as most in keeping with the aims of modern education. Moreover, in a society which indicts competition and endorses coöperation, hardly any room for choice exists. If anti-social practices and attitudes are to be restrained and social ones encouraged, the traditional marking system must be greatly modified. But the subject is so abstract, the proposal is so revolutionary, and the elimination of marks involves so many administrative readjustments, that busy teachers, whether in grades or graduate schools, are often tempted to mistrust their own private convictions that marks and report cards are abominations.

This analysis presents the case for the practical elimination of marks. Its arguments apply almost equally to all honor awards for scholastic achievement.

II.

The case for the prosecution of grades and marks in educational practice offers ten points for the consideration of the jury.

First, as now used, and as appearing on most report cards, marks are unscientific. They are unscientific (a) because they are based on subjective judgments of teachers untrained in statistical procedures; (b) because they are not related to standardized norms; (c) because they have not been validated in terms of educational objectives; and (d) because they usually relate to the *relative* performances of pupils in classes which vary in abilities from subject to subject and year to year. Statisticians observe that current attempts to standardize marks by the process of requiring instructors so to divide marks that "x per cent should be A," etc., are positively vicious, for in the long run the best teacher, attracting the best students, would give as many C's as the worst teacher who attracted the poorest students. A generation ago, and on several occasions since, investigators have demonstrated beyond peradventure that marks are unscientifically determined. The classic example is the geometry paper, photostated and submitted by Starch and Elliott to 116 high school mathematics teachers to mark. Their ratings ranged from 28% to 92%.

Second, marks are misleading, because pupils and public still accept an "A" as a fair guarantee of good scholarship, and believe a "D" indicates lack of knowledge. But most teachers and most high school pupils know that many A's are earned by students' amiability, to say nothing of good fortune in guessing which material to study or good strategy in examinations, while many D's are given because of misspelled words in history, lack of neatness in mathematics, or for purely disciplinary reasons.

Third, traditional marks and report card systems promote spurious, superficial and insincere scholarship. Activity motivated by desire to escape humiliation tends to nurture antagonistic attitudes toward the subject studied; and activity motivated by desire for honor over and above one's fellows is essentially and narrowly selfish.

Scholarship under such conditions is spurious because the student loves the mark rather than the wisdom it is supposed to represent. It is superficial because preparation is for examinations rather than mastery. It is insincere because it promotes an outward attitude of scholarliness when the true attitude is self-love.

Fourth, marks are a temptation to slipshod or downright poor teaching. Pupils may be badgered by threats of low marks, or wheedled by offers of high ones into obeying inane orders, conforming to dull routine, fulfilling uninteresting assignments. The marking system has become the incompetent or bored teacher's substitute for the rod and dunce cap on which educational psychology severely frowns, and which common humanity as well as state law has banished. Removal of the modern crutch will literally force teachers to greater classroom efforts and better preparation of their own programs. It will also reveal the inept pedagogue to himself as well as to his superiors.

Fifth, marks stand as an almost in-

surmountable barrier between teachers and pupils. Instructors who give marks become judges: judicial attitudes and authority are not conducive to the *rapport* between teacher and pupil which is essential to good teaching. The teacher, at his best, is the friend and intimate of his students. Elimination of the marking function would go far towards improving this vital relation between these individuals.

Sixth, marks and report cards have become so completely the motivation to study that pupils lean on them and perform as nearly as possible according to the instructions of teachers. Consequently, the sense of independence is lost, self-reliance is not developed and initiative is at a discount. Study halls presided over by teacher-policemen are natural concomitants of marks on report cards.

Seventh, the publication of marks by means of report cards, honors, prizes, etc., tends to develop anti-social feelings of inferiority or superiority in pupils. Aside from the unnecessary blow struck at the socialization or citizenship of pupils by the inescapable psychic consequences of comparing personalities, the effects on individuals *as* individuals are serious. For the complexes engendered lead naturally to the sequence of self-consciousness, selfishness, sophistication and suicide, whether partial or complete.

Eighth, marks promote competitive attitudes in pupils. For, unless they are based on strictly objective tests, properly normed and with predetermined standards for A, B., etc., *so that it will be possible for all to receive the highest mark,* students are forced into struggles to surpass each other. But competition has been discovered to be the bane of social life as well as the underlying cause of economic depressions and international strife. Teachers who preach coöperation while promoting competition will reap dragons' teeth. If competition in school practices is reduced, education may more effectively teach socialization.

Ninth, marks and other prizes develop the acquisitive spirit. Children are taught to expect pay for every effort, even for the most selfish forms of self-improvement.'' No wonder if later they regard money as the end of living, and lose thereby the habit of, or even belief in, service for the joy of serving. Refusal to pay pupils in marks for scholastic accomplishments will at least reduce the burden on those educators whose aim is to teach citizenship, social efficiency, or "character."

Tenth, eliminating the harmful consequences of marks listed in the first nine points almost automatically promotes their opposites. Whatever evaluations are made of pupil-progress are increasingly scientific in nature. Parents are more accurately informed of the standing of their children, and pupils themselves know more definitely and meaningfully where they stand. Sincere scholarship is once more freed of its most degrading fetters. Students are encouraged to innovate, to express independent thoughts, to rely on their own judgment and to support it courageously as well as reasonably. Teachers are stimulated to prepare more carefully and teach more effectively. Viewing the problem from the aspect of its effects on social character, the chasm between instructor and student is so reduced in both breadth and

depth that even the busiest teachers and pupils are encouraged to fraternize. Antagonisms between pupils are avoided, and feelings of friendliness are stimulated. Coöperative attitudes and practices are not only easier to promote — they multiply spontaneously. Finally, the habit of sharing with others rather than acquiring for one's self may be developed.

Nor are these outcomes of reducing marks and report cards to nil merely theoretical advantages. They are the observed outcomes of experimentation in many types of school and at every age level. Skeptics should study the reports of Dean Boucher of Chicago University, the progressive actions of certain faculties in New York University; the methods, results, and teacher opinions in Bronxville, Quincy, Newton, the North Shore Country Day School at Winnetka, the Cora Williams Institute and others; and the statements of students in classes and schools where marks have been reduced in number or eliminated. One is tempted to conclude that the universal elimination of marks might do for education what "self-starters" did for the automobile.

III.

The case for marks has been heard so many times that it is possible to provide at least a partial rebuttal.

First, it is observed that marks are used by colleges in determining qualifications of applicants for admission. "Therefore," the argument runs, "high schools must supply the marks." But the most progressive colleges have almost completely abandoned this use of high school marks. Physical, psychological, social and academic tests administered by the admitting institution, together with personality reports by principals or headmasters, have been found to be more valid measures of ability-to-function-in-colleges.

Second, employers need records of student accomplishment to guide them in selecting employees. "Therefore," the argument runs, "schools must supply the marks." But E. F. Knight showed in 1916 that there is almost no correlation, for example, between marks in normal school and actual success in teaching. The abolition of marks will force employers to use better methods of assaying the qualities of prospective employees.

Third, teachers often need to report pupil status and progress and student ability to parents and employers. "Therefore," etc. The conclusion does not follow. It were better to *report at need or on demand from records of actual accomplishment measured objectively and held in as great confidence as I. Q.'s now are.*

Fourth, "marks stimulate study." Yes, but what kind of study, study habits and scholarship? Where marks have been simplified, scholarship has improved.

Fifth, "marks are rewards for effort." Yes! "for caps and bells our lives we pay; bubbles we buy with a whole soul's tasking."

Sixth, "marks provide information for the assignment of honors." But such honors promote the same anti-social and anti-scholarly attitudes which marks nurture, and are to be condemned on the same grounds and in the same terms. Such practices confer added honor on the student whose mental equipment has enabled him to outstrip his fellows, or who has concentrated on self-improvement

while others were engaged in coöperative enterprises. It were far better *for all concerned* to forego the dubious pleasure of granting these special favors. The parents of those not honored are seldom pleased; and besides, "no one loves a champion" is more often true than not.

IV.

In the nature of things, it is impossible to anticipate and effectively answer every argument that may be made for the traditional marking system. It appears, however, that logic, psychology and sociology weigh heavily on the side of drastic revision towards infinite simplification of marking and report card systems. Certainly the evidence of experience, experiment, and theory are overwhelming in this direction. Readers must judge for themselves; and their judgment should be guided by the highest individual and social interests of the largest number of citizens. But judges should beware of permitting a single argument, *pro* or *contra,* to obscure the importance of others. The weight of evidence should rule, not the effect of a single unanswered or unanswerable argument.

It is significant that the present discussion was anticipated by G. Stanley Hall, probably before 1900. For he observed, in his *Adolescence:*

"The opposite extreme is the factitious and superficial motivation of fear, prizes, examinations, artificial and immediate rewards and penalties, which can only tattoo the mind and body with conventional patterns pricked in, but which lead an unreal life in the soul because they have no depth of soil in nature or heredity. However precious and coherent in itself, all subject matters thus organized are mere lugs, crimps, and frills. All such culture is spurious, unreal, and parasitic. It may make a scholastic or a sophistic mind, but a worm is at the root and, with a dim sense of the vanity of all knowledge that does not become a rule of life, some form of pessimism is sure to supervene in every serious soul."

The evolution of the marking and report card system has been gradual but rapid. Its "devolution" should follow a similar curve. And since the parents of the present generation of school children were nurtured on marks, they must be re-educated to their abandonment. We may conclude, then, that changes may be most rapid in small school systems and in communities of highly intelligent and adaptable parents. The large city systems must progress more slowly. Changes should always be preceded by adequate information for both parents and pupils.

Three alternative procedures are to:

1. Continue marks and cards, but base them on strictly objective examinations, validated in terms of educational aims. Such cards should be accompanied by full explanations of the significance of marks, which should be in terms of absolute accomplishments.

2. Continue the marks and cards but progressively reduce the number of variations from year to year. First, eliminate all plus and minus signs. Then reduce A, B, C, D, E to A, C, E, or Excellent, Pass, Fail. Then eliminate the honor grade. Then eliminate all but Fail—with the understanding that no news is good news. Then eliminate all formal announcements, reporting to parents the deficiencies of their offspring as soon as such deficiencies are discovered.

3. Abolish all marks and report cards in primary grades at once. A year or two later abolish all marks and cards in grades four to six. In 1938 abolish cards in grades seven to nine. In 1940 relieve senior high school teachers of this burden.

Of course these plans are susceptible of almost infinite combinations and permutations. Out of the great variety of experiments which the next few years are certain to witness, probably a sound and profitable procedure will evolve.

EDUCATION THROUGH COMMENCEMENT

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VIRGINIA, MINNESOTA

WHAT was to be done? Word came from the office that for the January commencement exercises no outside speaker would be engaged as there had been for two commencements a year for several years. We were now faced in Virginia, Minnesota, with the problem of arranging a student program. Perhaps an account of our experience will aid others with a similar task. After some discussion of ways and means, the English and public speaking departments led in forming and in executing the plans. It was only, however, with the coöperation of the art department, the music departments, both vocal and instrumental, and the school carpenter that the plans were successfully carried out.

The class motto, "Everyone is the architect of his own future," was chosen as the theme for the program. Our beautiful and dignified school auditorium was converted for the evening into a cathedral of learning. A soft light, produced by using only a few lights in the auditorium proper and nothing but the red and blue borders on the stage, lent an air of quietness. As the audience gathered, the interest centered upon the colorful altar-like window in the middle of the semicircular background formed by a gray cyclorama. Its beauty and the tracery of the stained glass effect were greatly enhanced by a flood of light from behind and above. The design for the large window, extending from the stage floor to the top of the cyclorama, was a combination of two original designs submitted by art students after their research in the art of stained glass. Unbleached muslin was used for canvas. In the high arch of the window was the emblem of the National Honor Society. Below, standing on the cobblestones before the entrance to a school building were a boy scout assisting an elderly woman and two students conversing about the day's work. With its colorful pictures and leaded effects the panel symbolized to the audience the education of the seniors.

To define recesses for the four tableaux, used to illustrate the students' talks, pillars were used, the framework of which was made of long staves held together by wire and covered with oiled wrapping paper. A marble effect was secured by green and blue spots placed in the base of the pillars. Although the audience was, perhaps, unaware of

their presence, the lights destroyed a dullness which would otherwise have marred the beauty of the setting.

The commencement mood of dignity and reverence was strengthened in our cathedral of learning by the playing of Suppe's "Poet and Peasant," an overture, by the high school orchestra. Then followed the processional, in which one hundred and four seniors in gray caps and gowns entered through two rear doors and proceeded in an impressive manner down the side aisles to their places in the reserved section. When all were in their places and the music had ceased, the class turned as one toward the audience and repeated in perfect unison a creed of their own writing. The reciting of the creed took the place of the more formal and usual invocation.

In keeping with the theme, we chose as a general heading for the senior talks, "Our Edifice—Character." The five seniors who appeared on the program were selected because of the merits of their literary compositions. Except for the first talk, "The Architect's Plans," which welcomed the audience and explained to them the nature of the program, each talk was illustrated by a tableau. The students appearing in the pictures were Juniors or Senior B's. The first tableau, illustrating the talk on "Parental and Legal Protection," which was an expression of appreciation to the parents for their sacrifices, showed the foreign-born citizens before the judge giving their pledge of allegiance to the American flag. It symbolized the foreigner's desire to participate in the educational advantages of America. The second, to illustrate the "Masonry of Character," an acknowledgement of the teacher's influence in character building, was a reproduction of that familiar Alice Freeman Palmer Memorial to be found at Wellesley. In the third tableau, used to illustrate the "Uprights and Girders" of their building, an explanation of the value of the required and elective subjects, was a boy working at a chemistry experiment; beside him was a girl who had closed her book and was interestedly watching results. In the fourth tableau, illustrating "The House Beautiful," which described the decoration of "Our Edifice—Character" through participation in extra-curricular activities, we grouped an artist seated at her easel and a violinist with his bow drawn. As the respective seniors concluded their talks and indicated the tableau, the curtains were gracefully drawn and a spotlight was cast from the balcony upon the appropriate picture.

Following the talks, the high school glee club, with orchestral accompaniment, sang "The Soldiers' Chorus." As a climax to this commencement program fifteen seniors were formally initiated into the Lafayette Bliss Chapter of the National Honor Society. This ceremony illustrated and stressed the merits and the privileges of a high school education. The presentation of the society pins by the superintendent of schools added to the dignity of the ceremony.

Another short selection by the orchestra preceded the presentation of the scholarship award and the diplomas. After each senior received his diploma, he took his place on the stage. When the last of the one hundred and four was in place, the class moved forward as the introduction to the class

hymn, written to an old Lutheran tune, was played. The singing of the hymn took the place of the benediction of former commencements. As the recessional was played by the orchestra, the seniors in their caps and gowns left the stage in single file for an informal reception in an adjacent room. When the last senior had left the stage, the colorful window was again visible and seemed to offer a benediction to all.

From the first the program had aroused a deeper interest on the part of the seniors than is usually manifested. They were each taking an active part in preparing the program. Because several departments were concerned with the execution of the plans, the burden did not rest entirely upon the shoulders of one or two faculty sponsors. The fact that the seniors put on their own commencement program strengthened the tie between the community and the school. The impressive attitude which prevailed throughout the evening proved, to those in charge, that the audience had caught the spirit of the program and that they approved of the change. We feel that there was much of value gained by the graduates as well as by others in the school who assisted. To return to the speaker type of program would mean to deprive both the students and the community of much value and pleasure.

THE CATSCLAN, A SERVICE CLUB

ACHSAH ALICE HARDIN
CENTRAL HIGH SCHOOL, PUEBLO, COLORADO

Miss Achsah Alice Hardin, one of the first sponsors of the Catsclan, is engaged in teaching social science at Central High School, Pueblo, Colorado. She received the A. B. degree from Western State College and the M. A. degree from Leland Stanford University. "Volstead English," written by Miss Hardin was published in "American Speech."

"WE will fight for the ideas and sacred things of the city, both alone and with many," vowed the Athenian youth. Likewise the Central youth in the Service club vows to give unstinted support to all school activities. The Catsclan supplements the Student Council in representing the school in the various relations involving school coöperation in community undertakings. It is a large group through which the governing body, the Student Council, may function. The chief duty of the Service club is management of graphic publicity and advertising for all school activities, including athletics, plays, operettas, debates, essay-oration contests, scholarsip contests, recognition of all commendable school work.

Similar clubs have been organized in many other schools. The Key club of Sacramento High School, sponsored by the Kiwanis club of the city, has been especially influential in rendering service to the school and city. The Boosters' club in Tulsa, Oklahoma, manages advertising for school activities and promotes coöperation between school and community. In Seattle, the Torch societies, based upon the merit system, serve their school, while in Everett a service club has endured

for nearly fifteen years. In Redwood City, the Iota Zeta is a luncheon club of boys who render service to their school. In fact, organized clubs all over the country are rendering valuable service to school and community.

The aims of the Central Service club are to arouse "school spirit"; to give staunch support to athletics; to create an enthusiasm for scholarship; to promote leadership; to stimulate the desire to render service; to manage publicity and advertising for contests, games, plays, musicals, and other undertakings of the school; to develop student initiative; to devise means of active, willing participation in group responsibilities.

Membership in the club is based on a point system prepared and adopted by the Student Council. Entrance into the club requires sixty points, thirty of which must be earned in at least four successive quarters and the others in the following quarter. To retain membership at least ten points must be earned each quarter. The Student Council has adopted the following system of service points:

CHART OF HONOR POINTS

NATURE OF SERVICE	POINTS
Service to the Entire School, Class A, Maximum points	45
1. Raising Flag	25
2. Bugling during flag raising	25
3. Acting as Member of Student Council	30
4. Yell Leaders	25
5. Regular Music for Assembly	25
6. Stage hands not on regular pay	10
7. Decorating School for Special Occasions	2
8. Manager of School Athletics	20
Service to a School Organization, Class B. Maximum	35
1. Service to a Club or Society (50 points a quarter to be awarded by vote of the club or sponsor)	15
2. Service Discovered by Roll Room (30 points to be awarded by vote of room for three candidates out of the ten selected by the roll teacher. Above on basis of 30 pupils to a roll room; larger rooms to use same proportion)	15
3. Service rendered to the Class as a Whole—freshman, sophomore, junior or senior (60 points a quarter to be awarded by a vote of class or by sponsor)	10
4. Selling Tickets for School Function	1
5. Season Tickets bought by Individual	1
Service Through Public Performance, Class C, Maximum	60
1. For each Assembly Appearance	5
2. For each Play Appearance	15
3. Operetta Chorus Parts	10
4. Operetta Leading Parts	15
5. Band or Orchestra Program for Public	5
6. Debate for Public	15
Athletics	
1. Players on Regular Team	30
2. Substitute Players	25
3. Winning First Place in a Local Contest	10
4. Winning First Place in a State Contest	20
5. Winning First Place in a National Contest	25
6. Placing for Finals through Elimination Contests	10
7. Winning Points in a State Track Meet	3
8. Winning Points in South Central Track Meet	2
9. Winning Points in a Local Track Meet	1
10. Taking part in a Track Meet (State or South Central)	10
Service Through Scholastic Attainment, Class D, Maximum	30

1. Three A's on Quarter Report 5
2. Four A's on a Quarter Report 10
3. Five A's on Quarter Report.. 15
4. Taking at least Four Subjects with B, or better 3
5. Winning First Place in a Local Contest 10
6. Winning First Place in a State Contest 20
7. Winning First Place in a National Contest 25
8. Placing for Finals in a State or Local or National Contest.. 10

Service of Miscellaneous Nature, Class E, Maximum 30

1. Points to be Awarded by Council .....Unlimited
2. Points Granted 8A Junior High School to be Awarded by Junior High Council—200 5

Service Points are certified by the Student Council and recorded by the point committee serving for the entire school year. The files have been carefully arranged, and they are kept in a cabinet in the office of the sponsor of the Student Council.

The officers have various fields of duty. The president is elected by ballot in regular club meeting. In order to insure a president of highest ideals, it seems wise to present a list of nominees prepared by the Student Council. The other officers are nominated from the floor and voted on by ballot. The president has the customary duties of a presiding officer and general supervision of all projects of the club. He is assisted by secretary, treasurer, and six vice-presidents, each of whom is chairman of an important committee of the organization. The first vice-president has charge of publicity and advertising, and all organizations of the school may expect aid from his committee. The second vice-president looks after scholarship and honor rolls. The third vice-president has control of athletics and sports, while the fourth has dramatics as his field. Musical organizations may look to the fifth vice-president for aid. The sixth vice-president is chairman of general welfare and looks after the school reputation.

The publicity committee places before the public the activities of the school which need support. The football season first demands attention. Sale of tickets must be advertised by some novel means, perhaps through votes of ticket owners for "Queen Central." Three candidates for queen may be selected by the Service club members to contest for this honor. The successful candidate is crowned with great pomp at the Homecoming game. Posters and writeups precede the "pep" assemblies for all the games. As the other athletic seasons open, similar campaigns are launched. Vodevil and dramatics may receive aid in advertising; operettas and band concerts may also receive support. All commendable work is accorded notice, whether it be a piece of woodwork, an essay, a map, a biological specimen, or a cornet solo. The publicity chairman has charge of the student bulletin boards in the halls for the use of his committee. The public, the student body, and the club members are informed concerning the projects of the school through art posters, daily bulletin notices, outside newspaper stories, Central Times stories, and special advertising features and stunts.

In the field of scholarship much can be done. The honor rolls are published and scholarship contests supported. A tutor bureau offers coach work for the absentees and weak students. This bureau sends letters of

encouragement to the deficient and discouraged people who are considering dropping out of school. The scholarship committee visits Junior High for the purpose of encouraging students to come to High School. The freshmen are introduced to informal customs of High School in the home rooms. The committee helps in planning and holding the academic tests for intra-mural. Information concerning college entrance requirements and scholarships is spread by this group. Campaigns are launched to abolish undesirable activities, cribbing, dishonesty in homework, or cheating. The scholarship committee does much by setting an example of high ideals before the school.

The duties of the athletic committee are many. The campaigns advertised by the publicity committee must be carried through to a successful conclusion. Stunts of various sorts are provided for "pep" assemblies; new yells and songs are presented. Parades and bonfires are planned and executed. Splendid opportunities for student projects are given at football games, between the halves. The club forms on the sidelines and marches in formation on the field, girls wearing attractive white skirts with blue jackets, and the boys wearing white trousers with blue shirts — all wearing white hose and white shoes. Then various figures are formed for the entertainment of the spectators. The Catsclan assists the Student Council in entertaining visiting teams. At the close of the athletic seasons the teams of the school are entertained and letter "C"s presented. Probably the most difficult task of the athletic committee is presenting assembly programs.

The duties of the committee for dramatics include preparation, staging, costuming, for "pep" meetings. The people on the committee are members of the speakers' bureau, whose mission it is to appear in assemblies and address the student body respecting school policies approved by the Student Council. They represent the Service club in their advertising programs by speaking, not only before school meetings, but before various civic organizations of the city as well. Debaters are encouraged, and the essay-oration contests advertised.

In the field of music, the committee aids in the "pep" assembly program by presenting new rally songs and supplying talent for "snappy" numbers. When the operetta is given, the music department may expect support from this committee in their advertising campaigns for selling tickets. The Service club seeks new talent and encourages enrollment in glee club, band, and orchestra. The Student Council may be aided by this committee in presenting the vodevil. The band concert is afforded full support in a ticket-selling contest. One of the chief duties of the music committee, however, is providing performers for "pep" meetings without overworking a few students who appear continually. The most difficult task before this committee is developing and encouraging the proper attitude of appreciation for sincere efforts made by performers of music.

The committee of general welfare assists the Student Council in guarding the reputation of the school. When occasion arises the members of the committee welcome visitors and act as guides. An inspection of the school

building is made each week for defacements and a report made to the proper authorities. Trophies are arranged and cared for. Perhaps the reputation of a school suffers most from improper conduct of students under a substitute's control; therefore the welfare committee supplies an assistant for the substitute in the absence of the regular teacher. If many high school students have evinced no interest in extra-curricular activities, it is the duty of the welfare committee to explain the purpose of school organization so as to arouse the desire for membership.

The welfare committee has worked out a plan for awarding a Fine Arts letter to students who have given service in public speaking, art and music. This letter is similar to the Central athletic letter.

Often obstacles prevent successful administration of service clubs. The organization in the student body may have been formed without proper orientation concerning the aims of the club. The sponsors may not be vitally interested in the success of the Catsclan. The work may have fallen upon a few students, overloading them and leaving the mass unconcerned. The burden of the club programs may have fallen too heavily upon the sponsors, leaving the students without training in bearing a share of group responsibilities. The most common obstacle of all, perhaps, is the neglect of regular school work for club activities. However, forewarned is forearmed, and many of these danagers can be avoided.

Values derived from the Service club fulfill the aims of secondary education. Students have actual experience in group life, and learn the joy of serving others. A spirit of helpful coöperation is created among students, and good school spirit is developed. The sponsors and students are brought to realize that both are working for the welfare of the school, and discipline is improved. Students are brought to recognize the use of ethics in defense of school welfare. Pupils who have taken part in the Service club have assumed as responsibilities problems of community life under wholesome guidance, and are therefore being trained for citizenship. The Service club seeks to prove that they are greatest who serve most.

GUIDANCE OF PUPILS IN THE CHOICE OF EXTRA-CURRICULAR ACTIVITIES

GEORGE E. MARK
STATE TEACHERS COLLEGE, SHIPPENSBURG, PENNSYLVANIA

A graduate of Dickinson College with an A. M. from the University of Pittsburgh, Mr. Marks served his apprenticeship as teacher and school superintendent before joining the faculty at Shippensburg.

A Preview

IN the field of secondary education there is no other problem more uncertain in its aims, so educationally thin in its evaluations, more difficult in administration, more socially uncontrolled, and more doubtful in its so-called democratic practice than the problem of extra-curricular activities. Among reasons that may be given for this situation are: aims and outcomes are found woefully unequal; there is no certain means of evaluating outcomes; there is lack of trained leaders for administration purposes; there is yet unequal opportunity for student participation; organizations are yet too much under the leadership of the aggressive pupils; there is sad lack in fundamental democratic philosophy. Guidance of pupils, therefore, in the choice of activities is a highly complex factor in an activity field rather loose in its organization and developing more rapidly than the means of control and understanding warrant. That it has, however, a groping, intelligent start is revealed in the following study of twenty (20) secondary schools of high rank in organization.

Scope of the Study

A study made of 20 high school organizations with respect to the administration of guidance in extra-curricular activities disclosed the practice in the guidance of pupils in the choice of activities. The types of organization of secondary schools studied are as follows:

	Types	*No. of Schools*
1.	Six Year	3
2.	Five Year	1
3.	Four Year	5
4.	Three Year Senior	7
5.	Three Year Junior	3
6.	Two Year Junior	1
	Total	20

There were organized extra-curricular activities in all of these schools.

Activity Groups

The activities of these schools were grouped for the purposes of this study according to the classification used by Koos in the Twenty-fifth Year Book, i. e., into 17 groups. These 17 groups included 355 extra-curricular activities. The Koos groups included 848 activities.

The classification by Koos with its corresponding activity frequencies shows that the four leading activity groups rank as follows:

	Koos Leading Activities	*Rank*
1.	Civic-Social-Moral	1
2.	Physical and Athletic	2
3.	Musical	3
4.	Scientific	4

The leading activities for this study are the same and rank as follows:

Leading Activities of This Study	*Rank*
1. Civic-Social-Moral	1
2. Physical and Athletic	2
3. Musical	3.5
4. Scientific	3.5

The Koos groups above include 471 of the 848 activities; the four groups of this study include 175 of the 355 activities.

The importance of these groups in the extra-curricular program may be expressed in this way: 55%, or 471 activities in the Koos group, and 50%, or 175 activities in the present study, indicate like needs and interests on the part of half of all the pupils concerned. That is, having these facts in mind an administrator of activities would know in which groups these choices of half his pupils would likely be. This is important for an administrator about to organize activities.

Getting Into an Activity

What must a pupil do to get into the various activities of this study? Following are the four leading requirements: fifty-one (51) per cent require a suitable interest; sixteen (16) per cent require the recommendation of a sponsor; thirteen (13) per cent require special ability in the pupil; eleven (11) per cent make a requirement of scholarship; nine (9) per cent had other minor requirements. If a pupil could present one or more of these qualifications, he was likely to be admitted to the activity which he desired. The lack of these qualifications kept him out.

Sources of Information

If a pupil is to choose wisely he must know something about the activities he wishes to enter. How does he secure this information? The following table shows this:

Source of Information	*Schools Reporting*	*Rank of Source*
1. Assembly programs ...	13	1
2. Members of activity ..	10	2
3. Visiting the activity ..	8	3.5
4. Written information ..	8	3.5
5. Advisers	7	5
6. Home-room discussions	4	6
7. Reputation of activities	1	7.5
8. Personal outside related interest	1	7.5

A school may have any number of these sources. As a means of information the assembly meetings rank first. Here the activities are explained as to purposes and previous achievements. Here the pupil may see the activities performing. Here is an objective appeal. The "members of activity" source ranks second. It is noticeable that advisers rank lower than activity members as a source of information. This, no doubt, is due to the fact that pupils cannot approach advisers as freely as they can members because of differences of age, position, authority, and attitudes between advisers and pupil members. They, therefore, receive explanations from pupil members in their own adolescent language and with restraint at its lowest level in the seeker after information. The other sources suggest their own explanation except, perhaps, "personal outside related interest." Such an interest might be a home radio,—hence a school radio activity would likely be the choice of a pupil interested in a home radio. It is evident that the schools studied are trying to make activity choice intelligent.

Limiting Activities a Pupil May Join

The practice among the secondary schools studied is as follows:

	Limitations	*Schools Reporting*	*Rank*
1.	No limitations	8	1
2.	Two activities	4	2
3.	One activity	3	3.5
4.	By a point system	3	3.5
5.	Three activities	2	5

In eight schools no limitations were set; if any occurred they were due to the activity schedule in relation to the regular curricular program — period conflicts and lack of time caused the limitations. Four (4) schools restricted pupils to two activities, 3 to one activity, and 2 to three activities. Three (3) schools, which used the point system, had an automatic check on joining activities; they had a minimum and maximum number of points to be earned by activity membership. The trend was in favor of limiting the number of activities a pupil may join.

Restricted Choice

There is, however, a limited pupil choice of activities. Among 8 of the secondary schools studied, ranging from 200 to 1850 in enrollment, 3 had 100% membership in activities, one had 88% membership, one had 60% membership, and 3 had 50% membership. These 8 schools, with a total enrollment of 8,750 pupils, had 2,180 pupils, or 25%, not members of any activity. In the 5 schools not having 100% membership in activities, 40% of the pupils were not in activities. The construction placed upon this is that there were activities insufficient in variety, that restrictions for membership in formed activities were too rigid, and that administrative leadership was lacking. Certainly the civic values of extra-curricular activities failed to reach 2,740 pupils of the 6,850 enrolled in the 5 schools in question. And yet it is inconceivable that so great a percentage of pupils would, of their own accord, remain out of activities. Such a condition would seem to be out of harmony with the usual adolescent psychology. It would seem rather that the opportunity of choice was restricted by administrative factors.

Summary

This study indicates that:

1. Pupils tend to choose activities having a predominantly literary and personality appeal.

2. The requirements for entrance to activities seem to be rigid and eliminating, since 12% to 50% of the pupils in a number of the schools are not members of any activity; or, if the pupils' lack of membership is not to be explained by entrance requirements, the schools have probably failed to make their activities program sufficiently flexible and attractive.

3. The schools present sufficient information so that pupils may know what goes on in an activity.

4. Twelve (12) schools of the 20 studied make definite limitations as to the number of activities a pupil may join.

5. The point system for the control of membership in activities has a very limited use.

6. Only one school requires membership in activities for graduation.

Factors Underlying Choice of Activities

Viewing the field of extra-curricular activities among which pupils may

make a choice, the following broad factors seem to underlie the whole program:

1. Educational factor: Do the activities adequately provide for knowledge, skills, appreciations, and attitudes for the pupils desiring to join them?

2. Social factor: Do the activities tend to create school morale and reflect the spirit of desirable organized society outside the school

3. Civic factor: Do the activities tend to develop responsibility toward the state?

4. Ethical factor: Do the activities tend to develop desirable standards of conduct with emphasis on the developing personality of the pupil

5. Administrative factor: Do the extra-curricular activities form a unit with other elements of the school program, and do the administrators of the activity program have the training necessary to meet the guidance requirements of the educational, social, civic, and ethical factors?

If these factors are being met, guidance of pupils in the choice of extra-curricular activities will gradually grow clearer in its principles, more certain in its objectives, and more adequate in meeting the needs of the individual pupils.

The study, spoken of in this paper, is but a slight contribution to the analysis of a school problem of great moment in school administration.

EXCOGITATION

LOGAN A. WAITTS, PH. D.

Dr. Waitts holds the Ph. B. from Chicago, M. A. from Columbia, and earned his doctorate at Ohio State. With six years' experience in the rural schools, six in the high school, and six as high school principal and superintendent, Dr. Waitts saw the need of what he chooses to call "Excogitation."

THE school administrator when he takes a new position, or a teacher in the classroom when she begins a new class, either in an old or a new environment, must do a certain amount of thinking for himself or herself which cannot be delegated to others. This thinking concerns a consideration of the work to be done, the difficulties to be overcome, and the means available for overcoming the obstacles.

The school administrator in any school system may be suddenly confronted with a problem demanding immediate solution. There may be little or no time for deliberation, yet, in such an emergency, before he can act intelligently, there must come to his mind certain essential factors affecting the school and its policies, discipline, and even the success of his teachers and pupils. In such emergencies chance alone, unless the mind is efficient, may decide the issue. There may be, on the other hand, weeks or months in which to study a problem from every angle. In either case the mental process should be fundamentally the same, namely: a consideration of the problem, the difficulties to be overcome, and the means for overcoming them.

It is a common experience in public schools to find the amateur school administrator and the inexperienced

teacher when confronted with vital problems, which arise frequently under such conditions, unable to function efficiently or indeed to function at all. The fault usually lies in lack of proper training and not in the want of mental ability. It is the aim of this discussion, by means of a definite plan or idea, to offer some help in a certain sequence to beginners and, perchance, suggest some few ideas to those more mature.

Quite trite is the fact that we all learn by our mistakes. In education, however, this method of getting efficient costs more in terms of child-welfare than it does in terms of money expended for training in teachers colleges and universities. Almost any right-minded, normally intelligent person might administer a school system, or even teach a class in a subject he knows, if no educational emergencies arose. But such emergencies do arise, and then amateur and inexperienced persons become confused and are unable to carry on effectively. They have, in fact, no understandable mission.

Whatever may be the attainment of a person in the business world or in a profession other than teaching, he cannot be an efficient school administrator or teacher, as he may sometime attempt to become, without a thorough technical education in the requisite art and science of the teaching profession. One may as well, because he is a teacher of hygiene and biological science, attempt to play the part of a physician and treat a patient for influenza. The patient might get well, and then again he might develop pneumonia to harass the amateur.

Examples from the history of education are not especially useful for the purpose of deducing new principles or theories, yet they are valuable for the purpose of illustrating those which have been found workable in given situations. The study of past problems of education in preparation for those that are to come will be detrimental if this produces a mental bias for solving new problems by recalling old methods. Such a study may aid but it cannot be substituted for thinking because, in applying abstract principles, it is necessary to follow a definite sequence of reasoning. This process of reasoning may be termed excogitation.

We hesitate to be specific in stating a formula for this mental process so necessary in arriving at sound solutions for problems as they arise in education, lest we seem to suggest an exclusive idea, and that is not our desire; much less is it a possibility. We do, however, present the following form for the convenience of any who may be interested.

EXCOGITATION

I. The Problem.
   Just what is the task before me?
   (a) Is it a matter of educational policy?
   (b) Is it disciplinary?
   Etc.

II. The Difficulty.
   Just why is there a problem and how or why did it arise?
   (a) If a problem of discipline,
   (1) What evil situation exists?
   (2) Why has it not been eliminated?
   Etc.

III. The Solution.
What are the means available for overcoming the obstacles?
(a) What can be done?
(b) How can it be done?
Etc.

IV. The Decision.
What am I going to do?
(a) How?
(b) When?
Etc.

Every problem has a number of influencing factors, and no scheme for solution can prognosticate them. Nevertheless, the analysis and ultimate solution of any problem is easier when one's mind is habituated to some logical plan or procedure, such as has been suggested above. The study of the situation presented is the foundation of a satisfactory solution for a problem; the method employed is the measure of one's efficiency.

The mission of a teacher or school administrator is the actuating factor in the solution of every problem that may arise in the public schools. It is determined by the educational policy of the School Board. If the educational policy of the School Board is based upon the "child-centered" idea, it is necessary to see all problems in the light of that philosophy of education. This does not, however, preclude the integration of ideas.

The efficiency of teachers and administrators depends, to a large extent, upon their understanding of and cooperation in the established policies of the school systems in which they accept employment. School Boards should, and sometimes do, invite teachers and administrators to participate in policy making. Good leadership and teamwork give confidence to teachers, and this increases efficiency in teaching. Thus every opportunity to make desirable contacts with layman organizations should be favorably considered. Every teacher, therefore, should know the personality of the individual members of the School Board.

There is opportunity for much regret when one forms hasty conclusions, or arrives at conclusions from too few data in any problem. The purpose of excogitation is to avoid error in arriving at a decision. Therefore, the decision should be the logical outcome, for, unless one has a weather-vane type of mind, thinking leads to a definite conclusion.

EDITORIAL

With Apologies to Dr. Newell

The science articles in the November number of Education were assembled by our Associate Editor, Dr. Lyman C. Newell, Professor of Chemistry, Boston University. Through an oversight he was not credited with the editorship on the title page of that number.

* * *

A Neglected Phase of Health Education

In 1894, as a result of a series of epidemics of children's diseases, Boston established a department of medical inspection in the public schools. Cubberly calls this the first stage of health work and says that we have passed through the second stage of detecting physical defects into what he calls the third stage of preventative medicine. The toothbrush, milk and water drinking, early to bed, open window, height and weight records, and balanced meals aspects of health education properly belongs to this latter stage.

But with this emphasis upon what the child should do to take proper care of the health have we not lost sight of what teachers and principals and health authorities should do to make our schools more healthy places for the children compelled by law to attend them?

Simms points out that in Massachusetts over a fifteen year period there was no relation between the amount of money spent for doctors and nurses and the number of children having measles, diphtheria, scarlet fever and whooping cough, although some cities were spending four times as much per child as was spent in other cities.

Why is it that with all the emphasis that is being placed upon health education we still have epidemics of measles and whooping cough that depopulate entire schoolrooms for a week or two at a time and continue to spread until practically every child in school who has not already had the disease contracts it?

Simms* shows that, so far as Massachusetts is concerned, it is not lack of money spent on doctors and nurses. It is entirely possible that the methods of organization are at fault. Dr. William Books, in an article in the Medical Record for May, 1918, on the Healthy School Child, asserts that there is no excuse for an epidemic of diphtheria or scarlet fever in the public schools of today, and that with proper organization of the staff, the public schools, instead of being a source of spread of contagion, will be the safest places for the child.

Our school buildings are far from sanitary. In cities with a national reputation for their health program for children there are some elementary schools with no facilities for cleanliness in toilet rooms, and in others where lavatories are installed, soap and paper towels are not provided because the children waste them! Many elementary schools in New England are swept but twice a week and dusted not at all, and yet the teachers are to emphasize cleanliness as part of the course of study.

* * *

Controlling Contagious Diseases

From the selection of the personnel to the organization of the program, the single aim should be the welfare of the school child. Selecting a physician because he needs or can use the money, or selecting a nurse because she needs an easier position than caring for the sick, will both prove injurious to the child.

Since no school physician is permitted to treat cases but is employed simply to exclude from school the children whom he regards as likely to have contagious

* Simms: Relation of money spent for medical inspection (doctors and nurses) in the schools of Massachusetts to the frequency of children's diseases. Unpublished Master's thesis. Boston University, 1932.

disease, a young doctor, fresh from an interneship in a contagious hospital, is probably better qualified for the work than a general practitioner with years of experience. The cost is much less and he is also far more likely to take the work seriously. The same thing is equally true of the school nurse. With the proper hospital training, the energy and enthusiasm of youth are far greater assets than experience in nursing the types of sickness that fall to the lot of the general nurse in practice.

It should go without saying that the school superintendent will need to exercise as much care in selecting a properly trained school physician and school nurse as he now exercises in securing a properly trained teacher for the Latin department or coach for the basketball team.

Only through daily inspection of school children may one hope to control the spread of contagious diseases. The once a week or twice a week visit on the part of the nurse or doctor is little better than no visiting at all. When an outbreak first appears in a room each child should be inspected at once and suspicious cases sent home. A nurse should give her entire time to the building until all danger of an epidemic is past.

The daily inspection is equally important as part of the regular routine. At the morning inspection the teacher sends to the nurse any child whose appearance leads her to suspect illness and the nurse either excludes the child from school or returns him to his class.

Epidemics occur in cycles with two or three intervals between. The few cities that have provided for the daily inspection of school children have found that with no increase in per pupil cost they have been able to control the spread of scarlet fever and diphtheria entirely and generally have been able to confine to a single room the spread of as contagious a disease as measles.

The most serious difficulty is the attitude of both physicians and laymen alike that these diseases must run their course. Any principal who can arrange to have a nurse visit his building daily and who is willing to put as much time on controlling the spread of contagious diseases as he now spends on controlling attendance, will not only have the satisfaction of proving his point but will win the everlasting gratitude of the parents of the children of his building.

DEPARTMENT OF BOOK REVIEWS

The Case Method Technique in Professional Training. By *D. Henryetta Sperle*, Ph.D. Teachers College, Columbia University, Contributions to Education, No. 571, New York, 1933.

This book is a useful one, though not as comprehensive as its title. It is practically a study of the case method applied to student teaching. In this field, under careful guidance, the method ought to be fruitful.

The case method in teaching has especial service in problem situations and with problem children. But, fortunately, many situations and most children are not problems. The case method ought not so to be stressed for the study of individuals that the need of the group or class and of the individual in the group is overlooked. The method achieves most when it works not only to the advantage of the problem child or situation but finds principles applicable in general.

The lazy, ill-informed or unskilful teacher will have no use for the case method. If he did employ it, no one else could use his findings. The method requires the skilled teacher, — observant, imaginative, systematic, and patient. Probably those who would use it most profitably would be most irked by the mechanical labor of transcribing the case. This labor should be reduced to the minimum without losing essentials. Carefully devised forms would save labor but even the best of them cannot include original observations and conclusions of discerning teachers. Room must be given for these. In a sense the case method is a record not only of the pupil but of the teacher as well.

Grounding in the case method would profit every teacher, creating a habit of thought in his daily work that would use every special situation for detailed study. The fuller and the more exact the record, of course the better.

The practice of keeping a central file of case studies in a given school system is commendable. It would be enriched, however, by adding to it case studies from other available sources such as newspapers, general and educational periodicals, and the experiences of social workers. Such a collection of cases, made in school and out, easily accessible in a school office, would be a gold mine for the true teacher.

We may find the case method applicable in other fields of education than those mentioned in this book. Doubtless instructors in school administration have used and are using it much. Principals and deans use it more or less formally. Speech departments, physical education departments and others would profit by it. Perhaps the History of Education, long since fallen from grace as a useful study in preparation for teaching, could be rejuvenated by a form of the case method—taking one phase after another of education as we find it today and tracing the facts and reasons for its historical development.

Finally, the case method, through the infinite variety of the material it furnishes, may stimulate teachers and administrators to contribute their bit to the educational literature of our country.

Dr. Sperle has done us a service in directing our attention to the utilities and possibilities of the case method in education.—ARTHUR H. WILDE, Boston University School of Education.

General Biology. By *E. Grace White*, Ph. D., Professor of Biology, Wilson College, Chambersburg, Pennsylvania. The C. V. Mosby Company, St. Louis. 615 pp., price $3.00.

The study of the cell is preceded by 40 pages devoted to a study of the grasshopper, "chosen as a type . . . because it has so few unpleasant associations." Likewise some forty pages are given to a study of the green plant, followed by additional study of the cell.

Part II is about equally divided between the animal and plant kingdoms, giving the instructor a wide choice of material.

Part III, on the Problems of Biology, covers many subjects, from enzymes to eugenics, the extensive bibliography possibly replacing a more extensive treatment of each.

The numerous illustrations are unusually clear, many of them being the work of Wilson College students.

NEW EDUCATIONAL BOOKS

We acknowledge receipt of the following publications of interest to the readers of EDUCATION. Mention here does not preclude review in this or subsequent numbers of EDUCATION.

The following have been received from the Bureau of Publications, Teachers College, Columbia University, N. Y.:

The Administration of Merit-Type Teachers' Salary Schedules. By *Lloyd Percy Young*, Ph.D. $1.50.

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A Textbook of General Biology. By *E. Grace White*, Ph.D., Professor of Biology, Wilson College, Chambersburg, Pa. 1933, illustrated, 615 pp., $3.00. The C. V. Mosby Company.

Secondary Education. By *Thomas H. Briggs*, Teachers College, Columbia University. 1933, 577 pp. cloth, $2.50. Macmillan Company.

The Emotional Responses of Children to the Motion Picture Situation. By *Wendell S. Dysinger*, Department of Psychology, State University of Iowa, and *Christian A. Ruckmick*, Professor of Psychology, State University of Iowa. 1933, 285 pp. cloth, $2.00. The Macmillan Company.

Motion Pictures and Youth. A Summary by *W. W. Charters*, Director of Educational Research, Ohio State University. 1933, 102 pp., cloth. The Macmillan Company.

Educational Psychology. By *William A. Kelly*, Ph.D., Professor of Education, Creighton University. 1933, 501 pp., cloth, $2.40. The Bruce Publishing Co.

The School and the Community. A Study of Local Control in the Public Schools of Massachusetts. By *L. Leland Dudley*, Graduate School of Education, Harvard University. 180 pp., cloth, $2.50. Harvard University Press.

A Practical Reader for Adults. Book Three. By *Josephine Dwight Mason*, Director of Evening Schools and Immigrant Education, Springfield, Mass., and *Gertrude E. O'Brien*, Teacher, Elementary Schools and Illiterate Adults, Springfield, Mass. Illustrated by *Margo Sylvester*. 229 pp., cloth, illustrated, $1.12. D. C. Heath and Company.

The Fusion of Social Studies in Junior High Schools. A Critical Analysis. By *Howard E. Wilson*, Graduate School of Education, Harvard University. 211 pp., cloth, $2.50. Harvard University Press.

Vocational Guidance in Engineering Lines. Elicited and Edited by the American Association of Engineers. 1933, 521 pp., cloth, illustrated. The Mack Printing Company, Easton, Pa. $2.50.

Dance As an Art. By *La Meri*, Director of the Department of Dancing of Regie Academia dei Fidenti, Italia. 1933, 198 pp., cloth, $1.50. A. S. Barnes & Company.

The Modern Dance. By *John Martin*, Dance Critic of the New York Times. 1933, 123 pp., cloth, $1.50. A. S. Barnes & Company.

The Life and Friendships of Dean Swift. By *Stephen Gwynn*. 362 pp., illustrated, 1933, $3.75. Henry Holt and Company.

Heredity and Environment. By *Gladys C. Schwesinger*, Edited by *Frederick Osborn*. 1933, 484 pp., cloth, $4.00. The Macmillan Company.

Health Facts for College Students A Text-Book of Individual and Community Health. By *Maude Lee Etheredge*, M.D., Dr. P. H., Professor of Hygiene and Medical Advisor for Women, University of Illinois. 1933, 342 pp., cloth, illustrated. W. B. Saunders Company.

How to Appreciate Motion Pictures. A Manual of Motion-Picture Criticism. Prepared for High School Students by *Edgar Dale*, Research Associate, Bureau of Educational Research, Ohio State University. 1933, 243 pp., cloth, illustrated. $1.20. The Macmillan Company.

Taxes and Taxation. By *W. B. Storm*, Mathematics Department, Northern Illinois State Teachers College, DeKalb, Ill., and *H. C. Storm*, Supt. of Schools, Batavia, Illinois. 1933, 108 pp., paper, 40 cents. McKnight and McKnight.

Metropolitan Achievement Tests. A New Series of Batteries for Continuous Measurement of Achievement in all subjects in Grades 1 through 8. By *Richard D. Allen*, Ph.D., *Harold H. Bixler*, Ph.D., *William L. Connor*, M.A., *Frederick B. Graham*, Pd.M., *Gertrude H. Hildreth*, Ph.D., edited by *Jacob S. Orleans*, Ph.D. 1933. The World Book Company.

Iowa Silent Reading Tests. Elementary Test. By *H. A. Greene* and *V. H. Kelley*. 1933. The World Book Company.

A Work Book in Educational Psychology. By *Harvey C. Lehman*, Ohio University, and *Stuart M. Stoke*, Mount Holyoke College. 1933. Prentice-Hall, Inc.

Practical Exercises in News Writing. By *Douglas Wood Miller*, Professor of English, Ohio Wesleyan University. 1933, 131 pp., paper, 88 cents. D. C. Heath & Co.

Directed History Study. A Student's Workbook in American History. By *Charles C. Scheck*, Ph.B., M.A., Formerly Instructor in Social Studies, Washington Junior High School, Rochester, N. Y., Lecturer in Education, University of Cincinnati, and *M. Althea Orton*, B.S., Formerly Instructor in Social Studies, Washington Junior High School, Rochester, N. Y. 1933, 168 pp., paper. World Book Company.

Improving Instruction in Reading: An Experimental Study. Supplementary Educational Monographs, No. 40. 1933, 226, xiv pp., $1.75. University of Chicago, Department of Education.

Education and Certification of Elementary Teachers. By *Frank P. Bachman*. Field Study No. 5, 1933, Division of Surveys and Field Studies, George Peabody College for Teachers. 225 pp., paper.

Programs of Guidance. Monograph No. 14, National Survey of Secondary Education. By *William C. Reavis*. 144 pp., paper, 10 cts. Government Printing Office.

Ted and Polly. A Home Typing Book for Younger Children. By *Ralph Haefner*. Illustrated by *Eleanor Osborn Eadie*. 107 pp., paper, 1933, $1.00. The Macmillan Company.

The Marywood Intermediate Grades Manual. By *Sister Mary Estelle*. To accompany Story Cargo, Sunny Skies, and Shining Towers. 1933, 83 pp., paper, 40 cents. The Macmillan Company.

The Shining Towers Workbook. To accompany Shining Towers. By *Sister Mary Estelle*. 1933, 64 pp., paper, 20 cents. The Macmillan Company.